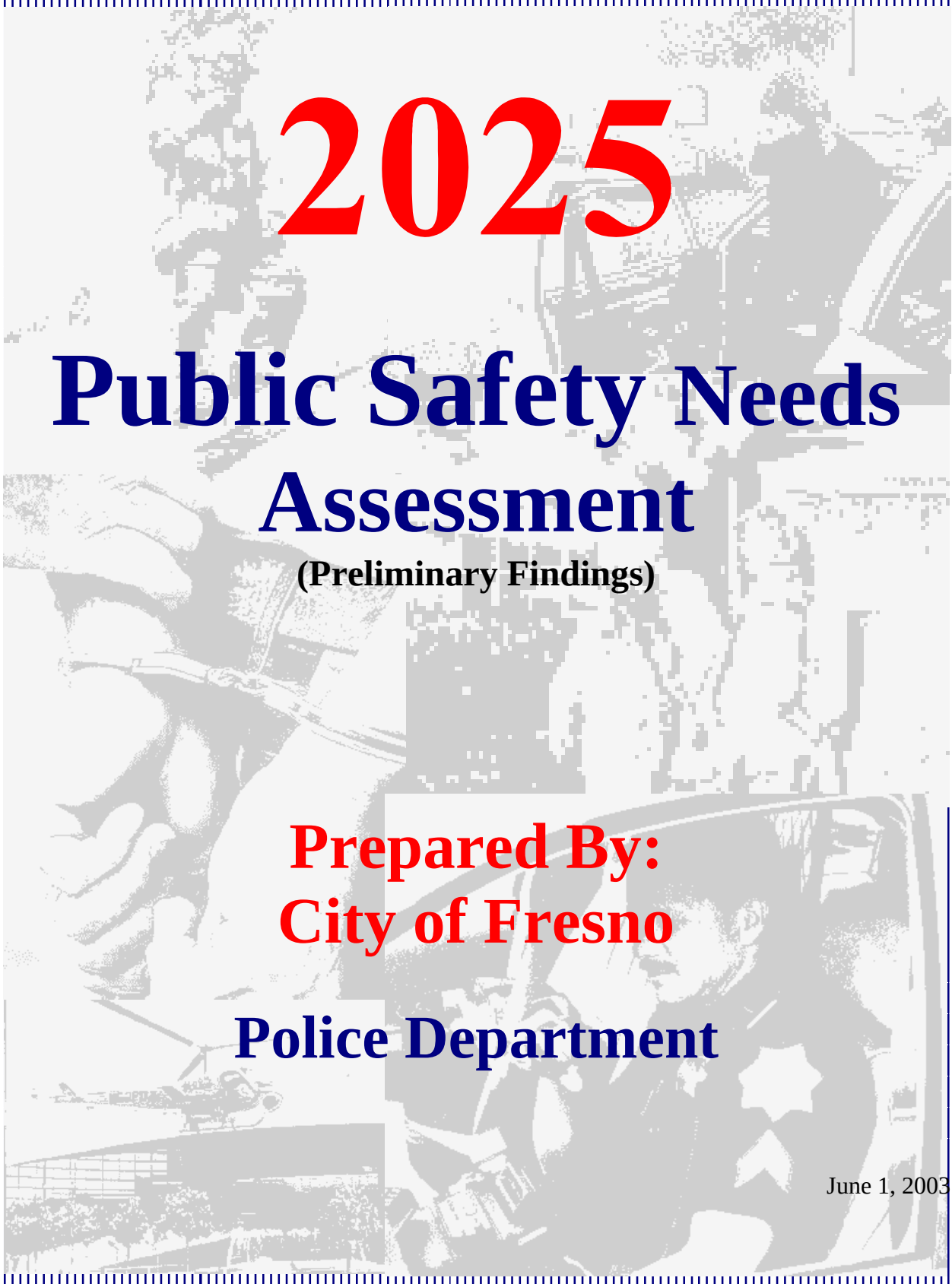
2025

Public Safety Needs Assessment

(Preliminary Findings)



Prepared By:
City of Fresno

Police Department

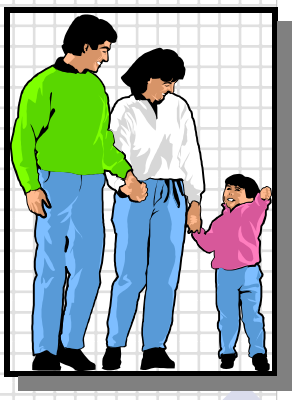
June 1, 2003

PUBLIC SAFETY NEEDS ASSESSMENT

Summary of Projections for the City of Fresno in 2025:

Fresno's population will increase 78.5% to 800,317

Exhibit 1



The City limits will increase to 124.9 square miles with 86.4% of this increase projected to live within 104 sq.mi.

Population Density will increase 60.5% to 6,925/mile.

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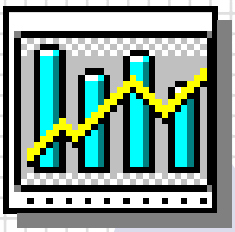
Calls for law enforcement services are projected to increase 66.5 % to 658,927

Exhibit 5

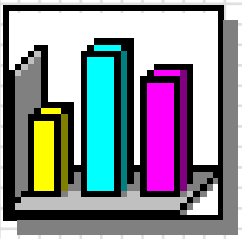


Between 2002 and 2025, the City of Fresno Total Crime Index is projected to increase 57% to 54,344.

Exhibit 2

Between 2002 and 2025, the City of Fresno Person Crimes Index is projected to increase 63.5% to 6,183

Exhibit 3



Between 2002 and 2025, the City of Fresno Property Crimes Index is projected to increase 50.8% to 46,488

Exhibit 4

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CHAPTER 1: GOALS AND OBJECTIVES OF THE PUBLIC SAFETY NEEDS ASSESSMENT

PURPOSE OF THE 2025 PUBLIC SAFETY NEEDS ASSESSMENT

The Fresno-Clovis Metropolitan Area has experienced significant population growth and urban development over the past 20 years, growth which is projected to continue reaching nearly 800,000 by 2025. Additionally, the Fresno city limits are expected to expand by almost 20%.

Growth begets challenge as city officials plan for increased demands placed on existing city services and infrastructure including transportation, recreation, and public safety services. Growth, if not properly managed, can result in a decreased ability of city government to serve and protect the families that call Fresno home, and directly impacts the quality of life for the community.

In addition to managing growth and development, city governments now face additional challenges. Public safety, as a function of local law enforcement, has forever changed following the events of September 11, 2001. Local law enforcement agencies have now been given an increasingly important role in domestic security, a role which traditionally was the responsibility of the federal government. By implication, local governmental organizations must now absorb these increased public safety costs in budgets that are being summarily cut due, in part, to the financial crisis occurring at the state level.

These costs include local law enforcement participation in monitoring and intelligence gathering operations, responses to weapons of mass destruction events, coordination and ongoing training in responses to a wide variety of potential terrorism incidents, and, when the National Threat Advisory is elevated, to actively protect various sites around the City of Fresno which are potential targets for terrorism.

These new policing responsibilities, mandated federally through the Office of Homeland Security and implemented at the local level, are designed to coordinate emergency responses to acts of terrorism. Perhaps the best example of this mandate is the new color-coded security levels issued by the federal government which requires local law enforcement to function accordingly dependent upon the current threat levels.

Following a review of intelligence and an assessment ofthreats by the intelligence community, the

Department of Homeland Security, in consultation with the Homeland Security Council, recently raised the threat advisory level to a high risk of terrorist attack, or "orange level." Although this level has once again dropped to yellow, it is important to understand the implications of local law enforcement operating in this condition.

High Condition (Orange). A High Condition is declared when there is a high risk of terrorist attacks. In addition to the protective measures taken in the previous threat conditions, departments and agencies should consider the following general measures in addition to the agency-specific protective measures developed:

- Coordination of all necessary security efforts with Federal, State, and local law enforcement agencies or any National Guard or other appropriate Armed Forces organizations;
- Taking additional precautions at public events and consider alternative venues or even cancellation;
- Preparing to execute contingency procedures, such as moving to an alternate site or dispersing their workforce; and
- Restricting threatened facility access to essential personnel only.

Growth, urban development, and the expanding role of local law enforcement based on national security and Homeland Defense requires the City of Fresno to develop strategies to not only project the impact on public safety services, but also to identify funding mechanisms to meet the needs of the community for many years. The old adage "a failure to plan is a plan to fail" has never been more true than it is in today's uncertain economic times.

OBJECTIVE OF THE PUBLIC SAFETY NEEDS ASSESSMENT

The overall objective of this plan is to identify the present and future law enforcement service needs of our community through the year 2025. One very glaring fact demonstrating the need for this plan is disclosed in the executive summary of the Mayor's Council of Economic Advisors Task Force Report (Weber Report). The Weber Report states that "[r]ecent Fresno trends in expenditures for Public Safety relative to revenue trends, if unmanaged, would *cause the entire General Fund to be consumed by Public Safety expenditures by the year 2008."* [Emphasis added][1]

To accomplish this needs assessment, data was collected that looked at:

1. Historical Trends. In most cases, 20 years of data was collected from 1982 through 2002 to look at population growth, crime trends, staffing levels, and costs.
2. Peer Comparison. Present day comparisons were also made with Bakersfield, Modesto, Long Beach, Santa Anna, Anaheim, Stockton, Riverside and Sacramento, as was done for both the Macias and Weber Reports, to compare present practices, staffing, expenditures and crime rates to find means and averages for services provided.
3. Officer to Population Ratios were determined nationally, from available research and empirical data, to compare Fresno's staffing levels and efficiency models.

4. Present building and facility usage was looked at in relation to recommendations made in other City of Fresno studies, and to determine future needs relative to growth patterns and population densities.
5. The research studies conducted in the Mayor's Council of Economic Advisors Task Force Report, Macias Consulting Group Audit, 2025 City of Fresno General Plan, and other documents were reviewed to consolidate the recommendations made within those studies, and to present as complete a Public Safety Needs Assessment as possible.

GOAL OF THE 2025 PUBLIC SAFETY NEEDS ASSESSMENT

Based on the data developed from the research conducted, the 2025 Public Safety Needs Assessment is intended to identify projected growth, crime trends, and workload as a means of recommending staffing levels, facilities and equipment based on these projections, through the year 2025. This information will then serve as the basis for decision making which enables the City of Fresno to utilize present and future community resources in an efficient and effective manner, provide for the public safety needs of a community experiencing substantial growth, and build a blueprint for successful, managed growth of the Fresno Police Department. The Plan shall be reviewed annually to ensure that the information contained within this report is accurate.

PROJECT METHODOLOGY

Data collection was assisted with the cooperation of the Budget Office, Finance and the Budget Analyst assigned to the Police Department. Cooperation from the identified peer cities was also an integral tool in assessing industry "best practices." The methodological process was conducted as follows:

Document Review. The following documents were reviewed and are cited in the text of this report:

1. Macias Consulting Group, Ltd., Operational Review of the Fresno Police Department, Final Report,
2. City of Fresno 2025 General Plan,
3. Mayor's Council of Economic Advisors Task Force Report
4. Police Department Property and Evidence Audit (Latta Report) Recommendations
5. United States Census Data/California State Department of Finance Information
6. Department of Justice Uniform Crime Reporting Statistics

In Chapter 2, projections regarding population growth, based on the Central California Futures Institute are made which serve as the foundation for service area growth; population density comparison; city development pattern projections; and a historical analysis of calls for service, and crime trends.

In Chapter 3, Staffing levels are analyzed by looking at historical officer to citizen population ratios as one interdependent measure of determining future personnel needs within the Police Department.

Current staffing ratios will be compared to national figures as well as the previously listed peer cities. Empirical information from studies conducted by the Police Foundation, International Association of Chiefs of Police, and other scientific studies will be utilized as a benchmark for averages within the law enforcement community.

Chapter 4 analyzes civilian to officer ratios from a historical perspective of the Police Department, as well as from an evaluation of peer cities, and other state comparisons based on a study conducted by the Commission on Peace Officer Standards and Training. Cost projections will be proposed relating to staffing needs for five year increments from the present through 2025.

Chapter 5 looks at the cost of providing standard issue equipment for officers under the differential ratio analysis. Consumer Price Indexing (CPI) has been applied, from a historical analysis, to identify immediate needs as well as project the costs of this necessary equipment through 2025.

Chapter 6 identifies vehicle costs based on the current model utilized, the additional equipment purchased for patrol vehicles, and the annual mileage accrued on these vehicles for determining the annual operations and maintenance (O&M) charges that are placed on the vehicles through the Fleet Management Division. An historical analysis of the cost differential from a 10-year data analysis is used to project future O&M costs. An analysis of the officer to vehicle ratio based on shift length is completed and an immediate need and projected cost analysis in five-year increments is provided which includes the purchase of these vehicles as well as their O&M costs based on differential staffing ratios.

Chapter 7 identifies the immediate infrastructure needs of the Department based on projected growth. These needs are quantified into immediate facility needs, future facility needs, and correlating equipment and supply needs based on differential staffing ratios. The cost of a sixth District Station is also presented based on population growth patterns and recommendations made in the 2025 General Plan.

Chapter 8 looks at the immediate and future implications, in more detail, of the Homeland Security requirements now faced by the Fresno Police Department. Although projections on costs are difficult to determine because of the variations in circumstances that could occur, past costs absorbed by the City are identified as well as future projections should a Full Emergency Deployment of law enforcement resources be needed.

Finally, a comprehensive table is presented in Chapter 9 with summary growth costs of personnel, equipment, vehicles, and vehicle operations and maintenance. This table identifies immediate needs and projected needs in five-year increments through 2025.

CHAPTER 2: PROJECTED GROWTH

A. POPULATION GROWTH PROJECTIONS

In 2000, the Central California Futures Institute (CCFI) affiliated with California State University, Fresno, published a report entitled "Population Forecast for Fresno County to 2025"(dated April 2000). This report has been generally accepted as an accurate portrayal of expected growth within Fresno County. In this report, CCFI provides a prudent forecast for a modest average annual population growth rate of 1.9 percent for Fresno County between the years 2000 and 2025.[2]

This growth forecast, prepared for and accepted by the Council of Fresno County Governments, indicates that the county population will increase by 479,407 people (58 percent) from a population of 821,797 to a population of 1,301,204 by December 31, 2025.[3]

Historical data establishes that approximately 61 percent of the county population will reside within the Fresno Metropolitan Area[4]. CCFI calculates the City of Fresno's population in 2025 based on 61% of the projected 1,301,204 residents in Fresno County.

Table 2.1 demonstrates that CCFI population growth estimates for Fresno County fall well short of the potential growth observed by the City of Fresno. In the 16 years between 1986-2002, the City of Fresno Population grew from 293,900 to 441,900 or a 50.3 % increase in population by the end of 2002. This represents an annual growth rate of 3.14% during this period.

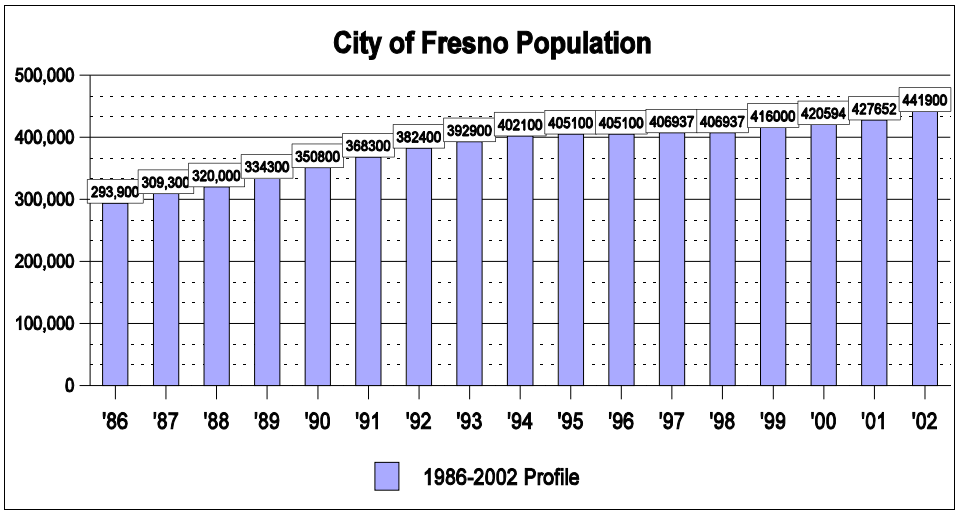

Table 2.1 *Source: Statistics Reported to the US Department of Justice, Uniform Crime Report*

If this growth rate were to remain constant, then the City of Fresno's population would grow at a rate faster than that of Fresno County resulting in a higher population projection for 2025.

By assigning 61% of the county's estimated 1,301,204 population in 2025, the City of Fresno will have a population of 793,734.[5] Although slightly larger than estimates from the United States Census Bureau, the numbers are consistent with the December 31, 2002 population estimates gathered by the State of California Department of Finance which established city population growth at 1.4% for 2002 to 448,453[6].

The Police Department's Information Services Bureau Manager used a four-year rolling average to

determine annual rate of growth for population projections. By using standard deviations to prevent growth anomalies from skewing the results, an average rate of population growth for the City of Fresno was calculated independent of the CCFI findings. The result, based on historical growth for the City of Fresno, established a slightly higher population in 2025 as follows:

2005.....479,372
2010.....545,473
2015..... 619,928
2020.....704,381
2025.....800,317

The total population gain by 2025 is estimated by CCFI at 351,864 persons.

Year	Projection
2002	448,453
2003	457,309
2004	468,145
2005	479,372
2006	492,109
2007	506,147
2008	518,550
2009	531,750
2010	545,473
2011	559,750
2012	574,355
2013	589,063
2014	604,277
2015	619,928
2016	635,997
2017	652,450
2018	669,300
2019	686,614
2020	704,381
2021	722,605
2022	741,294
2023	760,465
2024	780,137
2025	800,317

Table 2.2 *Source: C. Nerdahl, ISB Manager, Fresno Police Department See Exhibit 1*

B. SERVICE AREA

In 1984, the City of Fresno developed a General Plan (amended) which encompassed approximately 90,000 acres (140.1 square miles) as the sphere of influence for the City of Fresno. By the year 2002, the City had an incorporated area of 67,114-acres (104.0 square miles).[7]

C. POPULATION DENSITY

The 2002 population figure divided by the existing City area (104.0 miles) establishes a population density of 4,312 people per square mile.

Population Density			
Year	Sq. Miles	Population	Density
2002	104	448,453	**4,312**
2025	124	800,317	**6,454**

At the rate of population growth indicated, there are three possible scenarios. First, that the City would annex sufficient acerage to maintain the current population density in 2025 requiring the City boundaries to be 185.6 square miles (an addition of 80.7 miles).

The second scenario would be to distribute the anticipated population growth over the existing sphere of influence (140.1 square miles) which would add an additional 35 miles of City in which police services would be delivered and create an increased population density of 5,563 people per square mile. This would raise the population density by 24.5% on average over existing levels.

The third scenario would merely add the 2025 increased population to the existing City boundaries (104.0 square miles) to create a population density of 7,563 people per square mile. This represents an increase in population density of 43.5% over current levels.

Under the 2025 General Plan, the urban growth strategy combines the three scenarios as it recommends that 86.4 percent (725,000 people) of the forecasted population will reside within the constrained 1984 urban boundary.[8] The Plan states, however, it will also be necessary to accommodate approximately 13.6 percent (65,000 people) of the forecasted 479,407 population growth within an additional urban area and sphere of influence of approximately 20 square miles.[9]

The Police Department currently has five Policing Districts serving the 104 square miles of Fresno. This represents policing districts of approximately 21 square miles per district if simply averaged. By adding an additional 20 square miles to the area of the City, the Police Department would be required to add a sixth policing district as a means of keeping response times to a minimum. By simply adding the additional area to existing districts, response times would be delayed creating additional and unnecessary risk to the residents of Fresno.

The impact of the 2025 General Plan recommendation will be an increased service demand on the part of the Fresno Police Department as calls for service increase proportionally to population, require the Department to patrol and respond to emergency calls for service in a city 20 miles larger in 2025, and develop policing strategies for the 32.7% increase in City population density (comparing 4,275/mile for 104 square miles in 2002 to 6,352/mile at 124.9 miles in 2025). Law enforcement services will be required to cover additional area and serve substantially more people in 2025.

D. IDENTIFIED DEVELOPMENT PATTERNS

The 2025 General Plan contains implementation and regional cooperation measures "that strive to achieve the necessary consensus regarding the primary land use and resource management issues affecting the quality of life experienced within the metropolitan area and surrounding region."[10] The 2025 General Plan calls for balanced growth including urban growth areas to the North and the Southeast that would accommodate approximately 10,000 and 55,000 people, respectively. It further states:

> *The 2025 General Plan also intensifies strategies focusing upon the revitalization and enhancement of the established urban core. Particular emphasis has been placed upon new strategies to balance growth and development around a reinvigorated traditional downtown. These strategies address thirteen performance measures (contained in the Urban Form Element-Land Use/Infill Development topic) that have been identified for the urban core communities. These performance measures include development of substantial civic or public facilities (regional medical center phase I, downtown stadium), construction of 500,000 square feet of office space (either private or governmental/non-profit), increasing employment by 3,000 employees, addition of new off-street parking for 6,000 vehicles, rehabilitation of 1,000 dwelling units and construction of 1,000 new infill dwelling units (within the centre city area bound by Ashlan, Chestnut, Jensen and West Avenues).*[11]

Presently, the Department provides policing services to five geographic districts**.** These districts are determined, in part, based on population densities, calls for service, and geographic location utilizing the computerized Police Resource Optimization System (PROS). The development of the Southeast area to add 55,000 residents, as is suggested in the 2025 General Plan, may require the Department to consider establishing a sixth policing district as a means of keeping response times to calls for emergency services to a minimum.

CHAPTER 3: POLICE DEPARTMENT STAFFING LEVELS

The issue of determining staffing levels for law enforcement agencies is a critical component of effective management of the organization and utilization of resources. Fiscal constraint must be carefully weighed against effective service delivery as administrators meet the challenges presented by crime trends, community expectations, and shifting priorities.

There have been a number of studies conducted in attempts to determine how many officers are required to effectively respond to emergency calls, provide crime prevention strategies, and to enforce the laws of the jurisdiction. These studies include the Kansas City Preventative Patrol Experiment, research conducted by noted criminologists Samuel Walker and Charles Katz, studies conducted by the Rand Corporation regarding law enforcement ratios in post-war military operations, and a model for staffing developed by the International Association of Chiefs of Police which discuss and evaluate the role of officer to citizen policing ratios in determining staffing levels.

A. KANSAS CITY PREVENTIVE PATROL EXPERIMENT: A TECHNICAL REPORT (1973). George L. Kelling, Tony Pate, Duane Dieckman, and Charles E. Brown.

The experiment began in October 1972 and continued through 1973; it was administered by the Kansas City Police Department and evaluated by the Police Foundation. The experiment was focused on researching the effectiveness of differing patrol strategies and their impact on crime rates. To accomplish this, patrols were varied within 15 police beats. Routine preventive patrol was eliminated in five beats, labeled "reactive" beats (meaning officers entered these areas only in response to calls from residents). Normal, routine patrol was maintained in five "control" beats. In five "proactive" beats, patrol was intensified by two to three times the norm.

Information was gathered from victimization surveys, reported crime rates, arrest data, a survey of local businesses, attitudinal surveys, and trained observers who monitored police-citizen interaction. One of the goals of the experiment was the establishment of an officer to population per 1000 ratio to assist law enforcement administrators on appropriate staffing levels.

The study concluded that 2 officers per 1,000 population appeared to be an “optimum” level. Optimum, for the purposes of this experiment, was determined by productivity of the officers. The research speculated that ratios above 2 officers per 1,000 would allow too much “downtime” during a shift leading to a decrease in productivity per officer. Inversely, ratios below 2 officers per 1,000 depending upon the call load of the jurisdiction, resulted in a work force in a high crime area that was insufficient to handle calls for service.

The findings do not prove, per se, that a highly visible police presence has no impact on crime, or that a ratio other than the optimal level is insufficient to provide quality law enforcement services for the community in selected circumstances. What the research did suggest, however, is that

routine preventive patrol in conjunction with other patrol strategies, may result in better crime prevention and citizen satisfaction than preventative patrol alone.

B. POLICING IN AMERICA, SAMUEL WALKER AND CHARLES M. KATZ (2002)

Samuel Walker, a professor of Criminal Justice at the University of Nebraska, and Dr. Charles M. Katz, a professor in the Administration of Justice Department at the University of Arizona, have conducted significant research into law enforcement resource allocation. Through their research, the two have determined that resource allocation is not a standardized process but is rather dependent upon need (requests for service and defining the role of law enforcement) and available resources.

The researchers determined that the national average in law enforcement for officer to citizen ratios is 2.3 officers per thousand population; however, this ratio can differ between jurisdictions based on the relative crime rate in that area.[12] Walker and Katz note that increased crime rates typically are observed in jurisdictions where there is also a greater ratio of officers per thousand population.

C. RAND CORPORATION "FORCE REQUIREMENTS IN STABILITY OPERATIONS", by James T. Quinlivan, Published in *Parameters*, Winter 1995, pp. 59-69.

In this publicized study by James T. Quinlivan, Director of the Arroyo Center (the Army's federally funded research and development center) for policy analysis at RAND in Santa Monica, California. Quinlivan conducted research on appropriate troop levels used as peacekeeping forces in foreign countries as United States troops transition from a combat element to a peacekeeping "law enforcement" function. This article investigates the numbers required for stability operations, both for entire countries and individual cities, and explores the implications of those numbers for deployment, rotation, readiness, and personnel retention.

According to the study, the Army Field Manual 100-23, *Peace Operations*, defines the general concept of "peace operations" within the broader category of "peace enforcement", as:

> *....the application of armed force or the threat of its use, normally pursuant to authorization, to compel compliance with sanctions or resolutions--the primary purpose of which is the maintenance or restoration of peace under conditions broadly defined by the international community*.[13]

The RAND Corporation, under the research conducted by Quinlivan as a comparison to military peace enforcement staffing, has researched law enforcement ratios of the police presence in day-to-day in generally peaceful populations such as the United States. Overall, the United States is policed at a ratio of about 2.3 sworn police officers per thousand of population. If the ratio is calculated to include the civilian support apparatus of police departments, the ratio increases to 3.1 law enforcement personnel per thousand.[14] Quinlivan found similar officer to population ratios in the United Kingdom (excluding Northern Ireland) and other European countries.[15]

As an example of this dynamic, Quinlivan cites the October 1945, United States policy change and the operational shift to a "police-type" occupation following WWII. This change led to the creation

of the United States Constabulary (organized as a single large division) charged with the internal security of most of the American Zone of Occupation. The constabulary was created on the basis of one constable for every 450 German civilians (2.2 per thousand). The force was entirely adequate to its limited objectives of enforcing public order, controlling black market transactions, and related police functions. [16]

D. INTERNATIONAL ASSOCIATION OF CHIEFS OF POLICE (IACP) *"PATROL STAFFING AND DEPLOYMENT STUDY"* (1999)

The IACP has long been recognized for its preeminence in the fields of patrol staffing, deployment, scheduling, and productivity available to assist jurisdictions to cope with the highly technical considerations that characterize patrol staffing. Objectives of IACP patrol allocation, deployment, scheduling, and productivity studies are utilized to determine the number of field patrol officers and supervisors currently required to enable a department to:

- Respond to emergency and non-emergency demands of residents in a timely manner;
- Conduct prevention and other proactive patrol tasks effectively, including community-oriented policing and problem solving;
- Conduct all other patrol tasks effectively, including traffic control and special missions work;
- Allow officers to meet all administrative requirements satisfactorily, including report writing, training, court, and personal needs; and,
- Ensure the safety of the public and police officers.

The IACP believes that the exclusive use ratios, such as officer per thousand population, is inappropriate as the sole basis of decisions. Rather IACP staffing determination looks at interdependent information, obtained from current and accurate data sources, that weigh the following factors in determining appropriate staffing:

- Policing philosophy
- Policing priorities
- Police policies and practices
- Number of calls for service
- Population size and density
- Composition of population, particularly age structure
- Stability and transiency of population
- Cultural conditions
- Climate, especially seasonality
- Policies of prosecutorial, judicial, correctional, and probation agencies
- Residents' demands for crime control and non-crime control services
- Crime reporting practices of the community
- Municipal resources
- Trends in the foregoing areas.

Under the IACP model, primary factors in determining appropriate staffing levels include population data, "emergency" calls for service, response times, and time spent per call. The IACP also suggests that the sworn to 1,000-population ratio is a local issue to be evaluated in terms of the other associated factors.

RESEARCH SUMMARY

The research indicates that although "optimum" officer to population ratios may be from 2.0, as suggested in the Kansas City Preventative Patrol Experiment, to 2.3 per thousand population as determined by research conducted by Walker and Katz and the Rand Corporation, resource allocation is a function of understanding the interdependent relationship among four critical aspects:

- Population Growth Projections (as previously discussed in Chapter 2),
- Crime Trend Analysis
  - S Determining if there is any correlation between Crime Trends and Staffing,
- Emergency Calls For Service Trend Analysis, and
- Empirical Data including:
  - S Peer City Comparisons, and
  - S Department Historical Data analysis.

CRIME TREND ANALYSIS

Statistical crime trend analysis for the City of Fresno is standardized by the Uniform Crime Reporting (UCR) requirements of the United States Department of Justice. The UCR Program's primary objective is to provide a reliable set of criminal justice statistics for law enforcement administration, operation, and management. In 1973, the Bureau of Justice Statistics in cooperation with the US Census Bureau and the Department of Justice developed and implemented the National Crime Victimization Survey (NCVS). The NCVS was established to provide previously unavailable information about crime (including crime not reported to police), victims, and offenders.

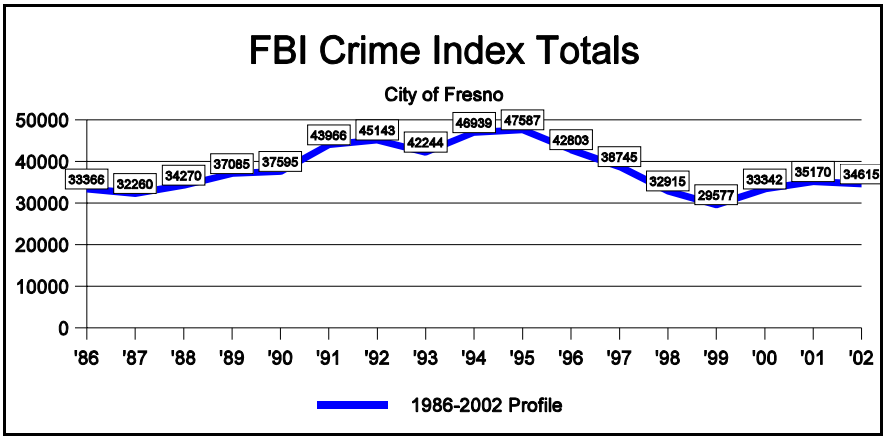

Table 3.1 *City of Fresno UCR Crime Index 1986-2002,* Exhibit 2

Table 3.1 graphically demonstrates three phases of crime rate increases and reductions since 1990.

From 1990 through 1995, Fresno experienced sharp increases in total crime rates from 37,594 to 47,587 in 1995 or a 21% increase in total index rates. Beginning in 1996, Fresno, as well as many other cities in the nation, began to experience dramatic reductions in crime to a 1999 low of 29,577 or a 38% decrease in overall crime index rates. In 2000, however, Fresno again began to experience a rise in crime from 29,577 to a 2002 level of 34,615 or a 15% increase.[17]

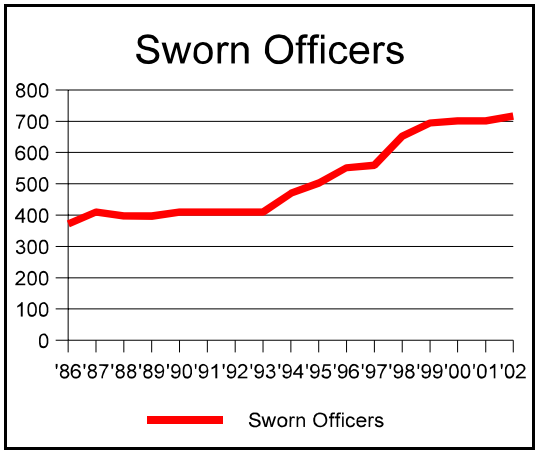

Table 3.2 *Department Personnel as reported to the Department of Justice, Uniform Crime Reports,* Exhibit 6

SWORN OFFICER GROWTH

An interesting correlation can be observed by comparing the growth rates in sworn officers from 1986 for the City of Fresno to the UCR Crime Index figures demonstrated in the previous table.

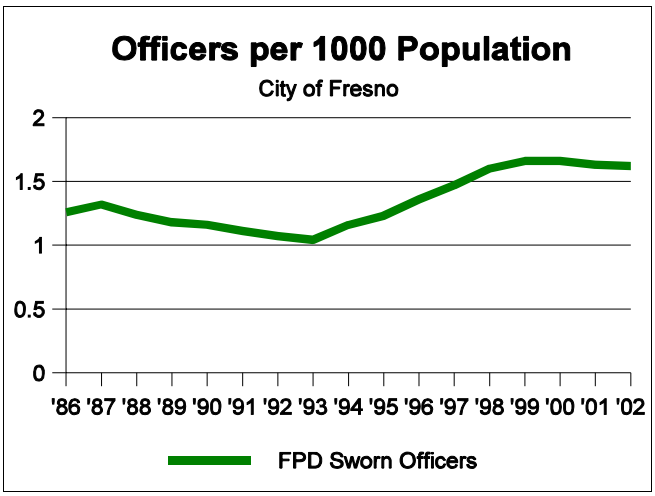

Table 3.3 *UCR Reports, 1986-2002, Exhibit 6*

Table 3.3 depicts minimal growth in sworn personnel from 1986-1993. Beginning in 1994, the Fresno Police Department began to add police officers as the crime rate began to peak. The addition of sworn personnel continued through 1999 as the crime index rate in Fresno hit the lowest index rate since 1985.

By comparing Tables 3.1 and 3.2, it demonstrates that minimal growth in sworn staff from 1999 through 2002 occurred during a period of time when crime rates once again began to rise.

OFFICERS PER POPULATION RATIOS

To further determine appropriate sworn staffing levels, many law enforcement agencies compare their numerical ranks to the population they serve. This type of comparison quantifies how many officers are available to handle a specific segment of the population, usually per thousand population.

Table 3.3 demonstrates that the officer ratio declined from 1987 from 1.32 officers per 1000 through 1993 to a low of 1.04 officers per 1,000. When compared to the City of Fresno UCR Crime Rate Index in table 3.1, there appears an inverse correlation of crime to officer per population ratios. As the staffing ratios decreased 21% from 1987 to 1993, the crime index indicates a 23.7% increase.

As officer/population ratios began to climb to a high ratio of 1.66 in 1999, crime index rates for the City of Fresno dropped from 42,244 in 1993 to 29,577 in 1999. This establishes an increase in the

officer/population ratio of 37% between 1993 and 1999, as well as a decrease of 30% in the crime index rate for the same time period.

CALLS FOR SERVICE

A study of the Calls for Service and Reports Written by members of the Police Department from 1986-2002 demonstrates steady increases in both categories as an indicator of work product. In 1986, members of the Fresno Police Department responded to 265,009 Calls for Service in the City of Fresno. By 2002, that number had increased 49% to 395,728.[18]

1986-2002 Work Product Comparison	
Population	… 50%
Calls For Service	… 49%
Reports Taken	… 41%

Reports taken by the Department also increased during the same time period from 85,191 to 120,047 representing a 41% increase.[19]

Between 1993 and 2003, the number of calls for service handled each year correlated to a figure that is 92.16 percent of the total population. Assuming that this same percentage will be consistent in 2025, then the Police Department will handle 658,927calls for law enforcement services by 2025. This represents a total growth of 66.51% between 2002 and 2025.

CFS Compared to Population		
Year	**CFS**	**Population**
1993	373,666	392,900
1994	392,980	402,100
1995	393,560	405,100
1996	361,573	405,100
1997	365,717	406,937
1998	373,710	406,937
1999	366,841	416,000
2000	369,404	420,594
2001	387,942	427,652
2002	395,728	441,900

Table 3.4 *Source UCR Crime Reporting Data prepared by ISB,* Exhibit 5

A ten-year analysis of reports to CFS suggests that the number of case numbers drawn per year is approximately 30% of the total number of CFS for the same year. This suggests that the total number of reports that will be written in 2025, based on an estimated 658,927 CFS, will be 219,374 case numbers issued for reports that year.

The use of published research is very important when looking at resource allocation and staffing levels in law enforcement. Although there are many variations on determining staffing levels, including the model currently being used by the Department referred to as the Police Resource Optimization System, from the research conducted there appears to be no hard and fast rule which proscribes officer to crime rate or officer to population ratios.

NATIONAL OFFICER PER POPULATION FIGURES

The United States Department of Justice, Bureau of Justice Statistics (BJS) has published a report named the Law Enforcement Management and Administrative Statistics, Local Law Enforcement 2000 which was published in January, 2003. The report collects specific staffing, crime, budget, and administrative data from a variety of sources and presents this information in a summary report. Page 2 of the report lists the 50 largest local law enforcement agencies by number of full-time sworn personnel per resident (population). The following table is an excerpt from this study:

Bureau of Justice Statistics, Full-Time Sworn Officer Per 1000/Population				
New York (NY) **5.0**	Chicago (IL) **4.7**	Los Angeles (CA) **2.5**	Philadelphia (PA) **4.6**	Houston (TX) **2.7**
Detroit (MI) **4.4**	Washington DC **6.3**	Nassau Co. (NY) **2.3**	Baltimore (MD) **4.7**	Miami-Dade Co. (FL) **1.3**
Dallas (TX) **2.4**	Phoenix (AZ) **2.0**	Suffolk Co. (NY) **1.8**	San Francisco (CA) **2.9**	Clark Co. (NV) **1.6**
Boston (MA) **3.7**	San Diego (CA) **1.7**	Milwaukee (WI) **3.3**	Memphis (TN) **2.9**	San Antonio (TX) **1.6**
Cleveland (OH) **3.8**	Honolulu (HI) **2.0**	Baltimore Co. (MD) **2.3**	Columbus (OH) **2.5**	New Orleans (LA) **3.4**
Duval Co. (FL) **2.1**	Denver (CO) **2.7**	St. Louis (MO) **4.3**	Atlanta (GA) **3.5**	Newark (NJ) **5.4**
Charlotte-Mcklenberg Co. (NC) **2.7**	Prince George Co. (MD) **1.8**	San Jose (CA) **1.6**	Seattle (WA) **2.2**	Kansas City (MO) **2.8**
Nashville (TN) **2.2**	Fort Worth (TX) **2.2**	Fairfax Co. (VA) 1.2	Austin (TX) **1.7**	Miami (FL) **3.1**
El Paso (TX) **1.9**	Indianapolis (IN) **1.3**	Pittsburgh (PA) **3.1**	Cincinnati (OH) **3.1**	Montgomery Co. (MD) **1.2**
Oklahoma City (OK) **2.0**	Portland (OR) **1.9**	Tampa (FL) **3.1**	Tucson (AZ) **1.9**	Buffalo (NY) **3.2**

Table 3.5 *Source United States Department of Justice, Bureau of Justice Statistics (BJS)*

By comparison, the City of Fresno has an officer per 1,000 population ratio of 1.67. Fresno also, as published in the Morgan Quinto Press citing the FBI Report *Crime in the USA 2001*, has a higher

violent crime index (940.3) and a higher violent crime ranking (#84) than the cities of **New York City** (851.0, #100), **Phoenix** (770.7, #121), **Las Vegas** (675.4, #151), **San Diego** (594.2, #176), **Milwaukee** (908.6, #89), **San Antonio** (815.5, #111), **Honolulu** (277.0, #275), **Columbus** (897.4, #91), **Denver** (539.6 #190), **San Jose** (609.1, #170), **Seattle** (725.1, #136), **Fort Worth** (706.6, #144), **Austin** (466.0, #212), **El Paso** (760.9, #127), **Indianapolis** (930.5, #86), **Pittsburgh** (868.2, #98), **Oklahoma City** (824.2, #105), and **Portland** (848.3, #101).[20]

2000 Commission on Peace Officer Standards and Training (POST) Survey

In 2000, the California Commission on POST published a study which identified reported staffing levels of agencies around California. Table 3.6 compares the snaffling levels of the peer cities based on the information obtained in 2000.

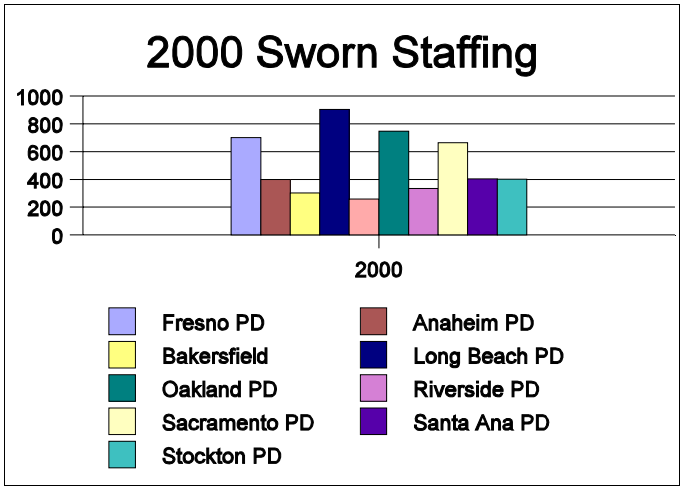

Table 3.6, *Source: Commission On POST*

A 2003 comparison was also conducted of peer city Police Departments used in the Macias Audit and Weber Report. The following information was obtained:

City	Population & Sq. Miles	Sworn	Officer per 1000 Population	Policing Districts	Sworn on Patrol	Civilian	Investigators
Sacramento PD (916) 433-0808	400,018 101 sq.mi.	700	1.75	6	250	400	Not Available at time of publication
Bakersfield PD (661) 326-3803	221,000 110.1 sq.mi	315	1.42	3	230	124	Not Available at time of publication
Modesto PD (209) 572-9501	200,000 36.2sq.mi.	246	1.4	4	131	106	32
Stockton PD (209) 937-8377	253,800 56.5sq.ml	377	1.48	4	140	183	60
Anaheim PD (714) 765-1521	328,014 49.7 sq.mi.	350	1.06	4	Not Available at time of publication	173	Not Available at time of publication

Long Beach PD	500,000 52 sq.mi	950	1.9	4	316	548	176
Riverside PD **(909) 787-7911**	265,000 78sq.ml	366	1.38	5	176	180	66
Oakland PD **510-238-3277**	405,970 52sq.ml	778	1.91	6	479	502	31
Santa Ana PD **714 245 8715**	343,700 27 sq.mi.	373	1.08	4	164	326	94

Table 3.7 *Source: Direct contact with each agency.*

FUTURE SWORN OFFICER HIRING

Based on projected population growth, and available data on officer to population ratios, the City of Fresno would need to hire officers according to Table 3.8.

The 1.67 ratio would keep the current level of service for the community. The optimal level of service would be, based on the information obtained on national averages of 2.3 officers per 1,000 population. This would meet the national average and allow more officers to be placed in preventative patrol and to handle calls for service.

The 2.0 ratio represents the "middle ground" between current staffing levels (1.67) and the national average. This ratio would also allow for expansion of calls for service patrol officers, and allow the Department to implement specific crime control strategies in the future.

Sworn Personnel

Differential Ratio Analysis

Year	Projected City Population	Sworn 1.67 Ratio	Sworn Added 1.6 Ratio	Sworn 2.0 Ratio	# of Sworn Added 2.0 Ratio
2003	**457,309**	745		745	
2004	**468145**	782	37	936	191
2005	**479372**	801	19	959	23
2006	**492,109**	822	21	984	25
2007	**506,147**	845	23	1012	28
2008	**518,550**	866	21	1037	25
2009	**531,750**	888	22	1063	26
2010	**545,473**	911	23	1091	28
2011	**559,750**	935	24	1119	28
2012	**574,355**	959	24	1149	30
2013	**589,063**	984	25	1178	29
2014	**604,277**	1,009	25	1209	31
2015	**619,928**	1,035	26	1240	31
2016	**635,997**	1,062	27	1272	32
2017	**652,450**	1,090	28	1305	33
2018	**669,300**	1,118	28	1339	34
2019	**686,614**	1,147	29	1373	34
2020	**704,381**	1,176	29	1409	36
2021	**722,605**	1,207	31	1445	36
2022	**741,294**	1,238	31	1483	38
2023	**760,465**	1,270	32	1521	38
2024	**780,137**	1,303	33	1560	39
2025	**800,317**	1,337	34	1601	41

Table 3.8 *Sworn Projections at Differential Ratios*, Exhibits 6,7

Chapter 9 provides an inclusive cost analysis including personnel, equipment, support staff, and vehicle costs based on these differential ratios.

SUMMARY OF FINDINGS

- Empirical research indicates that officer to population ratios of 2.0 per 1,000 is preferred under the Rand Corporation Study and the Kansas City Preventative Patrol Experiment.
- The national average is 2.3 sworn officers per 1,000 population.
- The International Association of Chiefs of Police recommends a comprehensive study of work allocation, crime trends and population growth for developing staffing ratios.
- Crime, Population, and Calls for Services are projected to rise in Fresno between 40-65% by 2025.
- Fresno Crime Trend Analysis appears to demonstrate an inverse correlation between hiring patterns of the Fresno Police Department, and the overall Crime Index. As hiring flattens, crime goes up.
- The Fresno Police Department, based on projections, will handle 66.5% more calls for service in 2025 and take more than 219,000 crime reports that year.
- Fresno has a lower officer to citizen ratio than Long Beach, Oakland and Sacramento.
- Fresno has a significantly smaller ratio of officer to 1000 than the largest cities in the nation; however, Fresno also has a higher UCR Crime Index Total than 18 of the 50 cities represented in the report.

CHAPTER 4: CIVILIAN STAFFING RELATIVE TO PROJECTIONS

Between March and September 2002, an operational review of the City of Fresno Police Department was conducted by the Macias Consulting Group, at the request of the City Council, as a measure of Department efficiency. Although many recommendations resulted from this audit process, several of these recommendations dealt specifically with civilian staffing in the Department. One of the findings concluded that the Department had the least amount of civilian personnel to support sworn officers of any of the peer city departments used in the audit comparison. [21]

Specifically the audit report, excluding vacant but authorized positions, found:

> *In the past 10 years, FPD personnel grew 72 percent from 643 employees to its current level of 1109 sworn and civilian employees. Most of this growth occurred in the early to mid-1990s. Since 1998, the growth of the FPD had slowed. The number of sworn personnel grew by 91 positions and the number of civilian positions similarly grew by 87 positions.*[22]

The workload of the non-sworn Department members is proportionateley increased as sworn officers are added to keep pace with population growth. The Macias Report found that "...an increase in the number of FPD sworn officers will impact the workload of existing civilian support staff."[23] In a comparison study between the Fresno, Sacramento, Oakland, and Riverside Police Departments, the Macias Report found that the Fresno Police Department had the lowest ratio of Non-Sworn personnel supporting the sworn officers in fiscal year 2003. Fresno had 1.81 officers to non-sworn while Oakland had 1.44 officers to every civilian support member of that Department.[24]

HISTORICAL CIVILIAN TO OFFICER RATIOS

An historical analysis was conducted of civilian employee to officer ratios utilizing Personnel Status Reports issued annually on July 1st , from 1992 to the present as prepared by the Human Resources Manager, Management Support Bureau of the Fresno Police Department. The Report indicates as follows:

Year	# of Sworn	# of Civilians	Ratio (Civilian to Sworn)
1992	410	233	.57
1993	423	256	.60
1994	471	248	.53
1995	507	268	.53
1996	526	268	.51
1997	578	287	.50

1998	615	307	.50
1999	694	333	.48
2000	701	349	.50
2001	702	365	.52
2002	719	391	.54

Table 4.1 *Source: Personnel Status Reports, Fresno Police Department 1992-2002*

The table indicates that the 10-year average civilian to sworn ratio is nearly a 1 to 2 ratio (.52). The table also indicates that during the ten year period, 296 officers were added while only 135 civilian employees were added (.46 ratio of civilian to sworn).

PEER COMPARISON

Under the 2000 California Commission on POST published study, the following ratios were determined through authorized civilian staffing levels of agencies around California.

CITY	# OF SWORN	# OF CIVILIANS	RATIO (CIVILIAN TO SWORN)
FRESNO PD	**700**	**341**	**.49**
ANAHEIM PD	**400**	**176**	**.44**
BAKERSFIELD PD	**301**	**109**	**.36**
LONG BEACH PD	**903**	**530**	**.59**
OAKLAND PD	**747**	**397**	**.53**
RIVERSIDE PD	**335**	**159**	**.50**
SACRAMENTO PD	**664**	**392**	**.59**
SANTA ANA PD	**404**	**292**	**.72**
STOCKTON	**401**	**182**	**.45**
		AVERAGE :	**.47**

Table 4.2 *Source: Commission on POST Published Report, 2001*

The table indicates that the Fresno Police Department, when compared to peer cities, has a slightly greater civilian to officer ratio, than does the average of the peer cities (.49 to .47) but was lower when directly compared to Long Beach, Oakland, Riverside, Sacramento, and Santa Ana. These findings are consistent with the findings of the Macias Report which establish that Fresno,

historically and presently, have lower numbers of civilian support staff than many other peer cities in California.

DETERMINING CIVILIAN STAFFING BASED ON PER 1, 000 POPULATION RATIO

An analysis was conducted to determine non-sworn personnel to population ratios based on historical data (See Exhibits 6 and 7). The data was collected from annual reports to the Department of Justice, Federal Bureau of Investigation, Uniform Crime Reporting Division. Exhibit 6 looks at historical non-sworn to 1,000 population from 1982-2003 to determine the annual average ratio and project this through 2025 to determine civilian hiring projections. Analysis found that a ratio of .83 non-sworn positions per 1,000 population would maintain the current level of service and is consistent with current staffing ratios.

Based on the population projections for 2025 (800,317) the Department would have 666 total non-sworn support staff if the .83 per 1,000 ratio were maintained. (See Exhibits 6 and 7 for calculation and projections).

To determine the apportionment of non-sworn staff, based on projected growth, the May 2003 Detail was examined to determine where authorized, non-sworn, positions have been established within the various Divisions, Bureaus, and Units of the Police Department. Table 4.3 shows the current distribution of non-sworn members within the Department.

2003 Civilian Staffing Allocations

	Present Allocation %	2003	2005	2010	2015	2020	2025	Net Gain 2003-2025
Projected Staffing Total		395	399	454	516	586	666	
Communications	26.49	98	106	120	137	155	176	71
Records	25.49	95	102	116	132	149	170	68
Patrol	19.29	72	77	88	100	113	128	52
Investigations	8.47	31	34	38	44	50	56	23
I. Bureau	6.78	25	27	31	35	40	45	18
Patrol Support	4.76	18	19	22	25	28	32	13
Management Support	3.97	15	16	18	20	23	26	11
Fiscal Affairs	2.79	10	11	13	14	16	19	7
Office of the Chief	1.6	6	6	7	8	9	11	4
			398	**453**	**515**	**583**	**663**	**267**

Table 4.3 *Source: May 2003 Fresno Police Department Detail, Positions Rounded up/down to nearest whole #,* Exhibit 6

Table 4.3 also projects the number of non-sworn support positions that will be gained by the Division, Bureau, and Unit over the course of the projection.

Cost Projections

There are approximately 41 different non-sworn classes in the Fresno Police Department with as many as five pay steps for each class of employee. To determine the actual personnel costs for civilian employees, the PeopleSoft Accounting Program was used to determine workgroups for non-sworn employees (See Exhibit 8 for calculations). The workgroup study revealed 10 coded workgroups. One years worth of data was collected in five pay periods covering 12 months. From this data, actual payroll expenses per workgroup were developed and totaled.

Once a total payroll figure for all non-sworn workgroups was determined, this figure was then divided by the actual number of non-sworn employees within the Department to arrive at an aggregate non-sworn employee cost to the City. This figure includes the benefits, overtime, and different steps within each class to reach this average annual non-sworn cost. Exhibit 8 takes a 3% Cost of Living Adjustment (COLA-as recommended by the Budget Office) to forecast the average annual non-sworn employee cost through 2025.

The final step to determine the cost to the Department is to project out the number of non-sworn to be hired in 2005, 2010, 2015, 2020, and 2025, based on the population projections, and multiply this by the cost per non-sworn employee for that time period. Chapter 9 includes a summary of the costs projections through 2025.

This formula was also used to establish sworn officer costs (workgroup total for sworn officers from the preceding year based on PeopleSoft data, divided by the number of actual officers to arrive at a Average Annual Sworn rate of pay projected through 2025 with a 3% COLA adjustment). This manner of calculating future personnel costs has a higher probability of accuracy in that it allows the capture of shift differential, special unit, bi-lingual, step increases, and rank, and overtime into the formula. Simply using rate of pay at step intervals would substantially underestimate the costs for wages and benefits in the future. (See Exhibit 9 for details).

CHAPTER 5: EQUIPMENT COSTS

D. DETAILED LIST/PRESENT COSTS

Safety equipment is essential for the safe and effective delivery of law enforcement services to the community. The following list of standard issued equipment is given to all sworn members of the Department.

ITEM DESCRIPTION	QUANTITY	COST
Belt Keepers	4	$6.00
Ammo Pouch	1	$18.95
Badge	1	$56.50
Citation Case	1	$45.95
Flashlight Batteries	3	$1.77
Expandable Baton	1	$59.89
Baton Holder	1	$16.00
Flashlight	1	$9.95
Flashlight Holder	1	$6.95
Handcuff Case	1	$10.95
Handcuff	1	$24.95
Handgun w/3 Mags	1	$625.00
Helmet	1	$284.77

ITEM DESCRIPTION	QUANTITY	COST
Holster	1	$58.00
Inner Belt	1	$16.95
Key Strap	1	$4.25
Outer Belt	1	$24.80
Penal Code	1	$9.95
Pepper Spray	1	$7.80
Pepper Spray Case	1	$12.95
Portable Radio	1	$1,006.00
Radio Holster	1	$21.50
Name Plates	2	$12.00
Soft Cap Badge	1	$56.50
Vest (Ballistic)	1	$465.00
Whistle	1	$4.25

Table 5.1, *Provided by the Property & Evidence Section, Fresno Police Department (May 2003)*

The total cost per officer for standard, issued equipment listed above is **$2,852.71**

E. ADD CONSUMER PRICE INDEX TO COSTS

The Consumer Price Index (CPI) is a measure of inflation issued by the U.S. Department of Labor, Bureau of Labor Statistics. The CPI is a measure of the average change

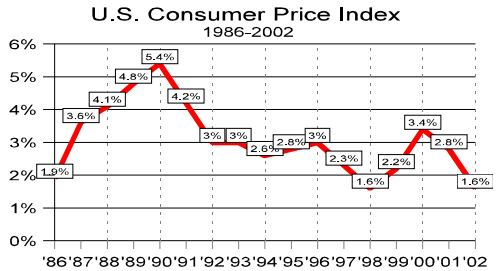

Table 5.2, *U.S. Department of Labor, Bureau of Labor Statistics (May 2003)*

over time in the prices paid for consumer goods and services.

To quantify future equipment costs, average annual CPI growth of 3% was included in the cost of equipment based on historical CPI annual growth rates.

From 1978-2002, the CPI index grew by 112.3% or by an annual rate of 4.492%[25] By using a four-year rolling average, a 3% CPI index can be added to the 2003 costs to project the 2025 costs. The $2,852.71 cost will increase to $5,466.09 as demonstrated in Table 5.4.

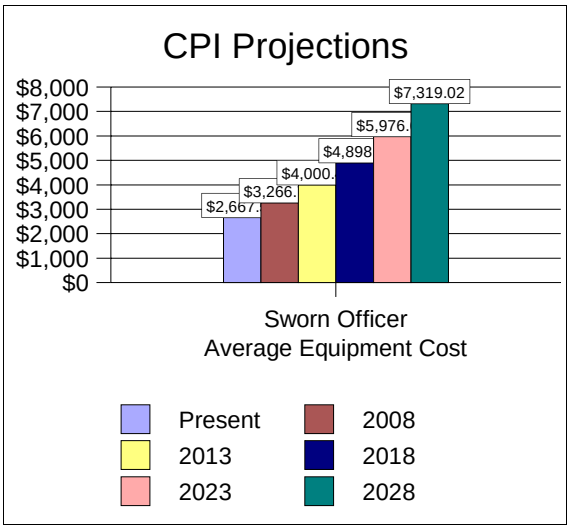

Table 5.3 *Source US Dept. of Labor*

Table 5.4 includes the present cost of equipment $2,852,71 per officer, adds the 3% CPI increase, and projects costs to equip officers through 2025. An inclusive personnel cost summary is included in Chapter 9.

Equipment Costs-Sworn Personnel

Year	Sworn 1.6 Ratio	Sworn Added 1.6 Ratio	Equipment Cost per Sworn	Annual Cost for Equipment	Sworn 2.0 Ratio	# of Sworn Added 2.0 Ratio	Equipment Cost per Sworn	Annual Cost for Equipment
2003	745		$2,852.71		745		2,852.71	
2004	782	37	$2,938.29	$108,716.78	936	191	2,938.29	$561,213.64
2005	801	19	$3,026.44	$57,502.36	959	23	3,026.44	$69,608.12
2006	822	21	$3,117.23	$65,461.90	984	25	3,117.23	$77,930.83
2007	845	23	$3,210.75	$73,847.26	1012	28	3,210.75	$89,901.01
2008	866	21	$3,307.07	$69,448.53	1037	25	3,307.07	$82,676.82
2009	888	22	$3,406.28	$74,938.27	1063	26	3,406.28	$88,563.41
2010	911	23	$3,508.47	$80,694.89	1091	28	3,508.47	$98,237.26
2011	935	24	$3,613.73	$86,729.46	1119	28	3,613.73	$101,184.38
2012	959	24	$3,722.14	$89,331.35	1149	30	3,722.14	$111,664.19
2013	984	25	$3,833.80	$95,845.09	1178	29	3,833.80	$111,180.31
2014	1,009	25	$3,948.82	$98,720.45	1209	31	3,948.82	$122,413.35
2015	1,035	26	$4,067.28	$105,749.34	1240	31	4,067.28	$126,085.75
2016	1,062	27	$4,189.30	$113,111.12	1272	32	4,189.30	$134,057.63
2017	1,090	28	$4,314.98	$120,819.44	1305	33	4,314.98	$142,394.33
2018	1,118	28	$4,444.43	$124,444.02	1339	34	4,444.43	$151,110.59
2019	1,147	29	$4,577.76	$132,755.10	1373	34	4,577.76	$155,643.91
2020	1,176	29	$4,715.09	$136,737.75	1409	36	4,715.09	$169,743.42
2021	1,207	31	$4,856.55	$150,552.98	1445	36	4,856.55	$174,835.72
2022	1,238	31	$5,002.24	$155,069.57	1483	38	5,002.24	$190,085.28
2023	1,270	32	$5,152.31	$164,873.97	1521	38	5,152.31	$195,787.84
2024	1,303	33	$5,306.88	$175,127.07	1560	39	5,306.88	$206,968.36
2025	1,337	34	$5,466.09	$185,846.97	1601	41	5,466.09	$224,109.58
				$2,466,323.67				**$3,385,395.72**

Table 5.4 *Source: Fresno Police Department Property & Evidence Control Section*

CHAPTER 6: VEHICLE COSTS

The City of Fresno currently uses a Ford Crown Victoria Police Interceptor package as the platform for patrol units. The following is a detailed list of the vehicle, emergency equipment, radio, and computer which make up the final unit. Included is information regarding the average mileage placed on patrol vehicles, the anticipated length of service, and the annual Operation and Maintenance charge assessed by the General Services Department, Fleet Management Division.

A. BASE PATROL CAR

Currently, the Fresno Police Department utilizes the Ford Crown Victoria Police Interceptor (CHP Class "E" Special Service Vehicle specification). The base vehicle is supplied by Downtown Ford Sales utilizing State Contract # 1-01-23-14-01, and comes with two (2) post-mounted spotlights, and rubber floor covering. The base cost of the unit is $24,400.00.

B. ADDED CITY OF FRESNO POLICE EMERGENCY EQUIPMENT

The following is a list of the additional equipment placed into each patrol vehicle. The list is compiled and maintained, based on the recommendations of the Police Department Vehicle Committee, by the Fleet Management Division of the City of Fresno. Currently the contracted vendor is Pursuit Technology utilizing Contra Costa County contract pricing for labor and some parts. Fleet also uses Federal GSA price schedules for parts not under Contra Costa County contract. The total cost for the installed emergency equipment is $8,000.00

Equipment List with Part Description and (Quantity)

- Code 3 MX7300 ALR light bar (1)
- Havis Shields HAV-C-3190 radio/computer trays (2)
- Whelen HA239C strobe tubes (4)
- Whelen WHE-VPP2SE power supply (1)
- Secure Idle (1)
- Federal Signal FED-LF12ERB map light (1)
- Troy TRO-TP3S partition (1)
- Rhino RHI-5035 push bumper (1)
- Troy TRO-2-PAR-25-06 lower extension (1)
- Troy TRO-CM-DATA911D computer dash mount (1)
- Troy TRO-CM-DATA911K keyboard mount (1)
- Troy TRO-AC-CC12ANGG perimeter angle cover (1)
- Troy TRO-CC-C12 console (1)
- Whelen WHE-UHF2150 head light flasher (1)
- INT-PKM-40 40 amp park kill module (1)
- AED-CS1191 rear prisoner seat (1)
- Cruisers CRU-RDPC rear door panels (1 set)
- Crusiers CRU-RWGUARD rear window guards (1 set)
- Federal Signal FED-TS100 100 watt siren speaker (1)
- Stewart Products STE-100PS speaker bracket (1)
- Federal Signal UTM4 siren/light control w / PA (1)
- LIN-C-10-GUN-A shot gun timer (1)
- Santa Cruz SAN-SC1-AR gun lock w /key (1)
- Santa Cruz SAN-SC1 gun lock w / key (1)
- Santa Cruz SAN-SC-1901 butt plate (2)
- SUR-1506 6 amp circuit breaker (1)
- DAV-CF12VDC 12 volt electric fan wired to ignition for venting of rear battery box (1)

- Plastic battery box for rear battery (1)
- Custom shotgun racks (2); one for less lethal folding stock Rem. 870; one for standard Rem. 870.
- 2.400 GHz low loss coax cable TAL-SMML195NCP (1)
- 2.400 GHz antenna TAL-MUF24005 (1)
- 800 MHz coax cable w/ TNC connector TAL-NMO-KUD-TNC (1)
- 806-866 MHz antenna TAL-NM0Q800B (1)
- 3/4 inch brass mount TAL-MB8 (1)
- VHF antenna TAL-QW152 (1)
- TSD-131-0010 100 amp circuit breaker mounted in trunk to protect rear battery (1)

B. ADDED RADIO EQUIPMENT

Prior to placing a patrol vehicle into service, a police ban radio is installed. The radio equipment vendor currently is Silverado Avionics utilizing State Contract # 1-00-58-24. The radio is a Kenwood, Model TK-790 / TK-890 Dual Band Kit. The installation of the radio is completed by the City of Fresno, General Services Department, Electronics and Communications Division. The installed cost of the radio equipment is $3,500.00.

C. COMPUTER EQUIPMENT

Added computer equipment to the Fresno Police Department patrol vehicles includes the Data 911/DataRadio/ Trimble Model(s) SV12D786EP 400 MHZ Kit for Data 911 computer; GPDD-6085-104-10 Gemini Lite for DataRadio; SveeEight Plus, GPS receiver for Trimble. The installation of the computer equipment is completed by the City of Fresno, General Services Department, Electronics and Communications Division. The installed price of the computer equipment is $15,000.00.

D. FINAL INSPECTION AND DECALS

The City of Fresno General Services Department, Fleet Management Division completes the patrol unit prior to placing the vehicle in service and applies the Department specific decals.

Complete Unit Price (2003) $50,900.00 per unit.

E. CURRENT RATIO OF UNITS TO OFFICERS

The recognized ratio of patrol cars to sworn personnel is 1 unit per 2.5 patrol officers for departments with 10 hour shifts such as the Fresno Police Department. There are approximately 225 marked units in the fleet. The City of Fresno General Services Department, Fleet Management Division estimates the current planned life cycle of a Crown Victoria as 5 years with approximately 20,000 miles per year being placed on the vehicle.

Table 6.1 demonstrates the cost per unit of a fully equipped patrol vehicle at the 2003 cost of $50,900. The information on costs was provided by the Fleet Division, City of Fresno. The 2003 cost is amortized through 2025 using the 3% CPI index as well. The table also show the total

number of units needed for the 1.6 and 2.0 ratio of officers per 1,000 population, as well as maintains the 2.5 officers per patrol unit ratio.

Vehicle Costs-Sworn Personnel

Year	Sworn 1.6 Ratio	Sworn Added 1.6 Ratio	2.5 Officer Per Vehicle Total	Per Unit Vehicle Cost	Total Cost	Sworn 2.0 Ratio	# of Sworn Added 2.0 Ratio	2.5 Officer Per Vehicle Total	Total Cost
2003	745			$50,900.00		745			
2004	782	37	15	$52,427.00	$775,919.60	936	191	76	$4,005,422.80
2005	801	19	8	$53,999.81	$431,998.56	959	23	9	$496,798.25
2006	822	21	8	$55,619.80	$467,206.36	984	25	10	$556,198.04
2007	845	23	9	$57,288.40	$527,053.27	1012	28	11	$641,630.06
2008	866	21	8	$59,007.05	$495,659.22	1037	25	10	$590,070.50
2009	888	22	9	$60,777.26	$534,839.90	1063	26	10	$632,083.52
2010	911	23	9	$62,600.58	$575,925.33	1091	28	11	$701,126.49
2011	935	24	10	$64,478.60	$618,994.53	1119	28	11	$722,160.29
2012	959	24	10	$66,412.96	$637,564.37	1149	30	12	$796,955.46
2013	984	25	10	$68,405.34	$684,053.44	1178	29	12	$793,501.99
2014	1,009	25	10	$70,457.50	$704,575.04	1209	31	12	$873,673.05
2015	1,035	26	10	$72,571.23	$754,740.78	1240	31	12	$899,883.24
2016	1,062	27	11	$74,748.37	$807,282.35	1272	32	13	$956,779.08
2017	1,090	28	11	$76,990.82	$862,297.15	1305	33	13	$1,016,278.78
2018	1,118	28	11	$79,300.54	$888,166.06	1339	34	14	$1,078,487.36
2019	1,147	29	12	$81,679.56	$947,482.87	1373	34	14	$1,110,841.99
2020	1,176	29	12	$84,129.94	$975,907.36	1409	36	14	$1,211,471.20
2021	1,207	31	12	$86,653.84	$1,074,507.65	1445	36	14	$1,247,815.34
2022	1,238	31	12	$89,253.46	$1,106,742.88	1483	38	15	$1,356,652.56
2023	1,270	32	13	$91,931.06	$1,176,717.59	1521	38	15	$1,397,352.14
2024	1,303	33	13	$94,688.99	$1,249,894.72	1560	39	16	$1,477,148.30
2025	1,337	34	14	$97,529.66	$1,326,403.42	1601	41	16	$1,599,486.48
					$17,602,332.46				**$24,161,816.95**

Table 6.1 ***Source: Fleet Management Division, City of Fresno,*** **Note:** Costs reflect # of vehicles rounded to nearest whole #.

F. OPERATION AND MAINTENANCE (O&M) COSTS

The City of Fresno General Services Department, Fleet Management Division has analyzed the Police Department Fleet records and determined that the average cost per mile for O&M per unit for calendar 2002 was $.48 per mile. That compares to an average cost per mile for O&M per unit in 1993 of $.37 per mile or a 3.3% increase each year.

The Consumer Price Index was used to calculate future cost increases into the annual O&M cost per patrol unit by 3%, less than the 10 year average as reported by the Fleet Management Division, City of Fresno.

The Fleet Management Division estimated that each patrol vehicle travels approximately 20,000 miles each year. This establishes a baseline cost per unit in 2003 $9,600 per unit per year at the $0.48/ mile rate currently being charged. This equates to an aggregate cost of $2,160,000 for the FY

2003 budget based on Fleet Management estimates of cost and mileage multiplied by the 225 vehicles presently in the fleet.

O&M Costs for Patrol Vehicles

Year	Sworn 1.6 Ratio	Sworn Added 1.6 Ratio	2.5 Officer Per Vehicle Total	Annual O&M Cost per mile	1.6 Ratio Annual Cost (20,000 mi per Unit)	Sworn 2.0 Ratio	# of Sworn Added 2.0 Ratio	2.5 Officer Per Vehicle Total	2.0 Ratio Annual Cost (20,000 mi per Unit)
2003	745			$0.48		745			
2004	782	37	15	$0.49	$146,342.40	936	191	76	$755,443.20
2005	801	19	8	$0.51	$77,403.26	959	23	9	$93,698.69
2006	822	21	8	$0.52	$88,117.51	984	25	10	$104,901.79
2007	845	23	9	$0.54	$99,404.94	1012	28	11	$121,014.71
2008	866	21	8	$0.56	$93,483.86	1037	25	10	$111,290.31
2009	888	22	9	$0.57	$100,873.54	1063	26	10	$119,214.18
2010	911	23	9	$0.59	$108,622.46	1091	28	11	$132,236.04
2011	935	24	10	$0.61	$116,745.53	1119	28	11	$136,203.12
2012	959	24	10	$0.63	$120,247.90	1149	30	12	$150,309.87
2013	984	25	10	$0.65	$129,015.97	1178	29	12	$149,658.53
2014	1,009	25	10	$0.66	$132,886.45	1209	31	12	$164,779.20
2015	1,035	26	10	$0.68	$142,347.97	1240	31	12	$169,722.58
2016	1,062	27	11	$0.70	$152,257.58	1272	32	13	$180,453.42
2017	1,090	28	11	$0.73	$162,633.65	1305	33	13	$191,675.37
2018	1,118	28	11	$0.75	$167,512.66	1339	34	14	$203,408.23
2019	1,147	29	12	$0.77	$178,700.11	1373	34	14	$209,510.47
2020	1,176	29	12	$0.79	$184,061.11	1409	36	14	$228,489.66
2021	1,207	31	12	$0.82	$202,657.63	1445	36	14	$235,344.35
2022	1,238	31	12	$0.84	$208,737.36	1483	38	15	$255,871.60
2023	1,270	32	13	$0.87	$221,934.95	1521	38	15	$263,547.75
2024	1,303	33	13	$0.89	$235,736.53	1560	39	16	$278,597.72
2025	1,337	34	14	$0.92	$250,166.46	1601	41	16	$301,671.32
					$3,319,889.82				**$4,557,042.10**

Table 6.2 ***Source: Fleet Management Division, City of Fresno*** **Note:** Costs reflect # of vehicles rounded to nearest whole #.

Table 6.2 projects the cost of operating and maintaining a patrol unit through 2025 based on Fleet Management historical cost and mileage data. The table projects the total O & M cost based on the number of vehicles required at the differential hiring ratios providing a total O & M cost per year through 2025.

The patrol vehicle purchase and O & M costs have been factored into the Cost Summary included in Chapter 9.

CHAPTER 7: INFRASTRUCTURE

BACKGROUND INFORMATION

The Police Department is currently utilizing many buildings and facilities that no longer meet the operational needs for providing efficient and cost effective law enforcement services. Extensive efforts and substantial money have been expended in an attempt to repair these buildings; however, continual increases in the demands for law enforcement services and corollary demands on these aging facilities suggest that other alternatives need to be explored.

Realizing the value of new construction to meet existing needs and future growth, the City of Fresno has successfully built the SW District Substation at the Kearney Palms Shopping Complex, and is in the initial phase of construction for a similar building in NE Fresno. These modern and well-designed facilities significantly reduce Operation and Maintenance costs as well as provide a professional venue for community interaction with the City of Fresno, such as construction of the new City Hall accomplished.

The following outlines eight proposed construction projects needed to adequately replace dilapidated or inefficient facilities currently being used. Where available, specific project details have been provided to justify the expense of the proposed building project. In other cases, the project is still in the conceptual stage and would require additional information to be gathered to accurately estimate building costs and details.

Immediate Priorities: New District Substations (CE, SE, and NW Districts)

Cost: $4.8 Million/per Substation

The Police Department has completed a new Substation in the SW Policing District and has recently begun construction, using the SW District specifications and floor plans, a 15 year lease/purchase for the new NE District Substation. The bid for the NE Substation is approximately $4.8 million. This bid includes the physical structure with the capability of future expansion as needed, parking lot for at least 100 vehicles, landscaping and fencing. The NE building design was based on the Southwest District Police Substation.

The proposed CE, SE, and NW Substations each will house more than 100 employees including a Captain, two Lieutenants, ten sergeants, seven POP/detectives, nine DCST officers, 65 patrol officers, nine CSOs and one SADC. Each 9,400 sq.ft., Substation will include the following components:

- Offices for the Captain, Lieutenants, SADC, Sergeants (10 cubicles);
- Lobby and reception office;
- POP/Detective office including Sergeant's office, interview room, monitoring room and eight work stations;
- Male and female locker rooms;

- Visitors' restrooms;
- Office space for future needs - 12 work stations;
- Captain's conference room, briefing room, break room, report writing room, evidence room, two separate storage rooms, copy/supply room.

Parking for 100 vehicles is necessary due to the number of department vehicles including, vehicles used by Headquarter's detectives/officers due to a lack of parking, personal vehicles and visitors.

Immediate Priority: New 9-1-1 Dispatch Center

Cost: $10,073,208

A newly constructed 9-1-1 Dispatch Center, to accommodate the expanding demands of this unit, would be approximately 15,125 square feet to include administrative offices, a dispatch center, a training room, equipment room, conference room, locker/restroom facilities for male and female employees, and adequate parking for 100 people. The facility would be designed and built to ensure performance before, during and after a major disaster including an earthquake. Design concepts will include a "base isolation system" to prevent the facility from ground motion generated by an earthquake. Critical building systems such as water, power, mechanical and communications will be supported by back-up systems to allow continued operation after primary system failures for a 48-72 hour period.

The design approach would include measures to control noise, accommodate natural lighting, customized air temperature at each work station, adequate work areas for each position and ambient light through outside viewing windows. The facility includes security monitoring equipment of the building, grounds and parking areas.

In addition to the cost of construction, equipment for a Communication Center with thirteen (13) radio dispatch positions and twenty-four (24) call taker positions would be purchased. The following estimates are preliminary quotes from vendors and/or city agencies. The equipment needed for the new 9-1-1 Dispatch Center includes the following:

▸ PC's for CAD support -	
37 @ $2,500 each	$92,500
▸ Monitors for CAD support -	
50 @ $800 each	$40,000
▸ Dual Monitor cards for Dispatch positions -	
13 @ $250 each	$3,250
▸ Arbitrators to support CAD at Call Taker positions -	
24 @ $1,500 each	$36,000
▸ Microwave for CAD Data link	$52,000
▸ Digital Recorder	$90,000
▸ RUPS System to provide uninterruptible	

Back Up power generator	$150,000
▸ Radio control unit with 13 operating dispatch positions @ $45,000 per position	$585,000
▸ Emergency Telephone System including operating system and 24 call taking positions @ $42,000 per position	$1,008,000
Total Equipment Costs	**$2,206,750.00**

Total estimated cost does not include any estimated cost for wiring, computer flooring or other costs. It does not include cost of work desks, chairs, etc.

Immediate Priority: New Property & Evidence Secure Storage

Cost: $10,825,356

As a result of identified problems in the operation and control of the Department's Property and Evidence Control Section (PECS), an external audit was conducted by Evidence Control Systems, Inc., in October, 2001. The audit, authored by Joseph Latta, made several recommendations to improve security and operational effectiveness of PECS. Specific recommendations included policy and procedure recommendations, many of which have been incorporated into the operational structure and procedures governing how the Fresno Police Department currently stores, inventories, and handles property and evidence.

The audit report dedicated two chapters to physical lay-out and construction improvements that needed to be made to adequately secure property and evidence. The report stated "...the layout of the Fresno Police Department's Property Room is fragmented and inefficient."[26] A recommendation was made in the audit report to develop "... one centralized location where all Property and Evidence functions could be combined under one roof."[27]

In accordance with this recommendation the Department has developed requirements for this 21,200 square foot structure to include 18,000 square feet of storage for evidence with two refrigerators for DNA and perishable evidence, one secure room with exhaust fans for narcotics evidence, and individual alarms and coded entry points at each secure location within the centralized storage facility. 1,700 square feet of the proposed building would be designed for administrative office space, including break and restroom/locker facilities.

Immediate Priority: HQ and Annex Building Security Upgrades

Cost: $ 330,000

Efforts have been made to increase security in and around the Police Headquarters and Annex buildings following the events of September 11, 2001. These security efforts included no or low cost measures designed to immediately increase the safety for employees of the City of Fresno in both buildings.

The next step in ensuring adequate facility security and further decreasing the likelihood of terrorist acts at these locations involves installation of specific, cost-effective security measures which balance public access with our increased need for safety. The following is a list of identified security items which are consistent with the security measures put in place by Federal and State entities:

- Installation of a CardLoc Security System to provide building security, group security, and individual accountability for identification and access capabilities to secure and confidential police facilities.
- Fence construction around the parking lot between HQ and the Annex building with eight vehicle entry gates and two pedestrian access gates, all controlled by the integrated CardLoc system.
- The installation of a Meterox Multi Zone Walk-Through metal detector in the front lobby of HQ, and
- A closed-circuit video monitoring system with seven cameras trained on the south side of the HQ building and the parking lot area.

Immediate Priority: Regional Law Enforcement Training Facility

Cost: $6,000,000

In 1999, the State of California designated the Fresno Police Department as one of their Regional Law Enforcement Training Centers. This designation was in recognition of the Department's commitment to peace officers skills training in Central California. The Department has since offered training on state-of -the-art driver and force options simulator equipment to more than 1,000 police officers per year.

The number of personnel that can take advantage of this equipment and training is limited by the size and scope of the training center currently being utilized. The current training space is just over 2,000 square feet which includes the two training simulator rooms and two classrooms. It is estimated by expanding this space, and the capabilities of the Department to provide "hands-on" training, the Department could increase the numbers of officers trained annually by 400%.

One of the identified needs of this region is an emergency vehicle operations facility that incorporates simulator training with "hands-on" vehicle operations in a controlled environment. The California State Commission on Peace Officer Standards and Training has determined that this type of training falls under perishable skills. Under a current proposal, law enforcement officers would have to meet minimum training requirements for perishable skills each year.

To comply with these training mandates, and the current needs of law enforcement training in the Central Valley, the Fresno Police Department is developing expansion plans for the existing Regional Law Enforcement Training Center. The phased development proposal would provide infrastructure improvements to include:

- Additional classroom space to quadruple the number of students,
- A new facility for the Drivers Training Simulator to increase student per year access,
- An asphalt driving surface for skills training in vehicles,

- A polished concrete skid pad for traction control training,
- A multi-purpose driving area, integrated with the skid pad area to allow for moderate speed training and pursuit intervention technique training.

Additional phased development of this project would include construction of an integrated range facility for firearms qualifications, tactical shooting, and force options "shoot-don't shoot" training to enhanced threat assessment skills. A final phase would include the construction of a scenario village where the drivers and force options training are integrated into controlled scenarios to instruct and assess officers' skill levels in scenario based events.

The benefit of the phased development of this type of facility is to enhance the safe delivery of law enforcement services to the community, a skill that is becoming more complex each year. To obtain this level of necessary training, agencies in this area must travel extensive distances to Southern California and to the Bay Area. With the suspension of State reimbursement for law enforcement training, agencies are required to either expend funds from other operational areas to provide the training, or to suspend this training all together and risk increased exposure to officer injury and increased liability for the officer, agency, and City.

This proposed facility, based on the success of the existing facility, is a primary means of ensuring that the officers of the Fresno Police Department, and the other members of law enforcement from this region that obtain their training from this Department, receive this training in uncertain economic times.

Immediate Priority:, Holding Facility/Field Evidence Collection/Forensic Laboratory Facility
One Year Start-Up Cost: $10,000,000

As demonstrated in Chapter 4, the addition of sworn employees impacts the Department's ability to provide non-sworn support services. The impact on non-sworn support services is also effected by increases in calls for service and the increasing number of crimes committed in Fresno.

The increase in crime rates and corollary arrests have a direct impact on the Technical Services Bureau. This Bureau is responsible for prisoner processing, crime scene evidence collection, fingerprint searches, and maintenance of the Department's temporary holding facility for prisoners, to name a few of their functions.

As crime rates increase, the number of field evidence calls, identification procedures, and prisoner processes increases proportionately. The Fresno Police Department has been providing Technical Services Bureau services in the same facility and with the same number of staff as it had in1970. This has continued even though the City's population has expanded at 1.9% per year and Bureau service requests have grown at 3-8% per year The current facilities are currently so congested that many DUI suspects are processed in a temporary facility (Mobile DUI Trailer) located in the parking lot of the Annex.

Many other agencies in the region are experiencing similar growth in demand for these services. In response to these increases, the Clovis Police Department has recently constructed a new facility to expand their capabilities in field evidence collection. Clovis also constructed a new, state-of-the-art temporary detention facility to hold and process prisoners. Similarly, the Fresno County Sheriff's

Department has reorganized their forensic laboratory to expand their field evidence collection capabilities in response to increased demand for these services within the County of Fresno.

To meet the present and future needs of the Fresno Police Department, the Technical Services Bureau will have to expand the number of staff and acquire new facilities for field evidence collection, prisoner processing, and for temporary holding facilities. Additionally, increased investigative capabilities and operational efficiency can occur from phased development of a Forensic Laboratory within the Department.

Prisoner Processing/Holding Facility Unit Approximate Cost: $3,000,000

The manager of the Technical Services Bureau has suggested that a separate unit be created to temporarily hold and process prisoners. Currently, the holding facility has three holding cells in the Identification Bureau, with two secure holding cells for interviews in the investigations area. The current facilities do not allow members to segregate juveniles from adults without making special arrangements. Similarly, females can only be separated from males by conjoined cells but must stay in the same general area as the male prisoners.

Members of the Technical Services Bureau must perform various functions within the Bureau. A new holding and prisoner processing facility would be separate in function and operation from the other responsibilities concentrating on prisoner security and processing including data entry, identification verification, fingerprinting and mug photos. This would increase security in the holding and transportation of prisoners, and allow members of the Identification Bureau to focus on a single task. Estimated space for this unit would be approximately 3,000 square feet with audio/video monitoring, separate entry and exit points for juveniles and adults, segregation of male to female prisoners, and interview/interrogation rooms nearby. This space would also house the fingerprinting and photographic equipment, files, and have a public lobby to process those persons that are not in custody but require photos and fingerprints.

Field Evidence Collection Unit Approximate Cost: Integrated Into Forensic Laboratory Facilities

This function requires Technical Services Bureau members to respond to the field to process crime scenes and to collect evidence. This is a critical function of the investigation process and assists crime scene detectives and patrol officers in making criminal cases for prosecution. As the number of sworn officers increase to keep pace with the City's population, Field Evidence Technicians must also increase. Additionally, the Field Evidence Collection Unit must have the facilities to process the evidence collected, preserve the integrity of the evidence, and maintain the chain of custody to protect the evidentiary value of items collected.

The Technical Services Manager has determined a need for a new 15,000 square foot facility (in conjunction with the proposed Forensic Laboratory) to house the Technical Services Bureau, the Field Evidence Collection Unit, the equipment needed to process crime scenes, and the security needed to maintain evidentiary integrity. This facility would include sufficient storage including cold storage of serological evidence, drying racks, and have trace evidence collection capabilities. The facility would also include covered, secured storage for vehicles to be processed in major crimes with appropriate bays for this function.

Forensic Laboratory Approximate First Year Start-up Cost: $6,500,000

The Technical Services Bureau currently utilizes a combination of approaches for evidence analysis. For presumptive drug screening, the Fresno Police Department uses the Fresno County Sheriff's Department Crime Lab and their equipment. For DNA analysis, trace evidence, serological evidence, and ballistic testing, the Department uses the California Department of Justice Crime Lab in Fresno. Although these services and lab space are being provided at no cost to the Department, the State is currently exploring a fee for their crime lab services and the Fresno Sheriff's Department is uncertain if they will be able to provide space in their lab for Fresno Police Department use in the very near future as they reorganize field evidence collection with crime lab functions.

Aside from potential costs for these services, time delays for test results severely impacts the Department's ability to expeditiously conduct investigations. These delays may be worsened due to the State economic issues resulting in insufficient staffing for the Crime Lab. Although this is not a certainty, the possibility has been expressed and a state hiring freeze has severely impacted the lab's ability to provide full staffing.

Many California law enforcement agencies, smaller than the Fresno Police Department, have very functional crime labs as an internal resource for their departments. Although the start-up costs may be expensive, the long term benefit of providing these services internally, of integrating forensic analysis with the investigation function, and the ability to provide these service to outside agencies in the region, may outweigh the cost of building a forensic laboratory program.

Locally, the Fresno County Sheriff's Department has a very functional crime lab housed in approximately 4,200 square feet. Their Forensic Lab is staffed with six criminologists and one evidence technician and has an annual operating budget of $650,000. The Forensic Lab is accredited by the American Society of Crime Lab Directors and is supervised by Criminalist Michael Koop.

The Lab is structured into three areas, a Drug Section for analysis using a Gas Chromatograph Mass Spectrometer (GCMS), a Ballistics Section for testing and comparing firearms evidence using the federally-funded Integrated Ballistic Identification System (IBIS) data base and equipment, and a state-of-the-art DNA Lab. The following is a partial list of the equipment needed for each section of a Forensic Laboratory:

Drug Analysis Section: Estimated Equipment Cost: $168,500

Item Description	Quantity	Cost per Unit
Analytical Balance Scale	2	$6,000
Top Load Balance Scale	2	$2,500
Stereo Binocular Microscope with Digital Photo Capability	2	$4,000
Chemicals	Varies	$2,500
Centrifuge	2	$1,000

Fume Exhaust Hoods	4	$5,000
Lab Work Benches and Storage	Dependent on Lab Size	Varies on Materials Used
Cold Storage for Drug Standard	1	$2,000
Analytical Supplies	Annual	$10,000/yr.
Agilent Technologies 7683 Series GCMS	1	$95,000
Annual Service for GCMS	Annual	$4,500

Ballistic Section: Estimated Equipment Cost: $314,000

Item Description	Quantity	Cost per Unit
Bullet Water Tank	1	$50,000
Kevlar Bullet Trap	1	$6,000
Stereo Binocular Microscope with Digital Photo Capability	2	$4,000
Copy Stand Digital Camera	1	$2,500
Chronograph for Gel Studies	1	$2,500
Fume Exhaust System for Lead Particulates	1	$5,000-$7,000
Lab Work Benches and Storage	Dependent on Lab Size	Varies on Materials Used
Bullet Comparison Microscope LEICA DMC Model with DC 500 13.9 Megapixel Digital Camera, 19" flatscreen monitor and Compaq Computer System Support	1	$75,000
Analytical Supplies/Tools	Annual	$3,000/yr.

Polarizing Microscope for fiber and trace evidence	1	$50,000
Infrared Microscope for trace evidence	1	$100,000
Gun Shot Residue testing supplies and equipment	Annual	$8-10,000

DNA Laboratory: Estimated Equipment Cost: $1,000,000

Note: The DNA Testing requires a number of separate rooms with varying levels of contamination security. This is a partial list of the process required to extract DNA evidence based on ASCLD accredited standards and tested evidentiary procedures.

18. Serology & Trace Evidence Extraction. A sufficient area is needed to obtain the serological evidence needed for DNA analysis. This space would include substantial counter space, in a contamination free environment. Equipment needed includes a Pure Water System (Ionic Exchange Filter), fume hoods, camera equipment for 1-to-1 photos and elctro-freeze P30 gels, incubation ovens at 100^{o} and 38^{o}, one fluorescence microscope, and three additional stereo binocular microscopes with digital capabilities.
19. Buffer Preparation Area including centrifuge, autoclaves, and various Ph metering systems.
20. DNA Extraction Lab
21. Preliminary Chain Reaction Setup Lab

Additional Lab Requirements: Estimated Cost $3,500,000

A Forensic Laboratory, based on the number of annual investigations conducted by the Fresno Police Department as compared to the Fresno County Sheriff's Department, could be established in a 15,000 square foot facility with the Field Evidence Collection Unit. The Forensic Laboratory would minimally include the following to meet accreditation standards:

- Library/Research Room with subscriptions to scientific periodicals and electronic data bases,
- Administrative offices,
- Locker room facilities with showers,
- Break room,
- Conference/Training room,
- Significant walk-in freezer storage space for long term DNA evidence retention,
- Cold storage for serological analysis,
- Phot Lab,
- Flammable Liquid/Gas storage meeting OSHA standards,

- Dry Chemical (Acid/Base) storage,
- Rack storage systems in secure area,
- Gun vault,
- Sound-deadening room for ballistic testing.

Forensic Lab Staffing Requirements: Estimated Cost: $1,300,000.

(10) Criminalists. Based on the number of annual investigations conducted by the Fresno Police Department as compared to the Fresno County Sheriff's Department, 10 Criminalists would be required to operate the Police Department's Forensic Lab. A Criminalist, as required by ASCLD, must have a Bachelor of Science degree in a hard science such as Biology or Physics, and a minor in Chemistry. Typically, Fresno State University graduates several hundred people per year with a degree that would meet this requirement including the Graduate Degree or Master in Science Program. The Fresno County Sheriff's Department pays their Criminalists approximately $100,000 per year with benefits. One of the Criminalists would supervise lab administration and personnel and be accountable to the Technical Services Manager of the Investigations Division.

(4) Evidence Technicians. The County has one evidence technician for their laboratory using that person to assist Criminalists as needed. Currently the Department has an Evidence Technician class and can utilize these persons for this position, should it occur. Approximately four Evidence Technicians would be needed to staff a Forensic Laboratory.

Additional Consideration:

Fresno has a significant arson rate with minimal ability to forensically analyze evidence found at these crime scenes. One Forensic Laboratory component that could have immediate value for the entire region is to develop a laboratory facility with expertise specific to arson investigations. At this time no specific laboratory was found that had this expertise. Consequently, cost evaluation and equipment needs could not be determined. Research will continue.

5-Year Priority: New SKYWATCH Flight Center

Cost: $ 2,876,575

Efficient operation of the SKYWATCH program requires expansion from the existing site to accommodate new equipment, additional personnel needed to expand flight time, and for hangar space for equipment. In May 2002, a Safety Survey was conducted of the Skywatch Operations of the Fresno Police Department. The survey was conducted by the J. Shuler Associates, Ltd., from Indian Wells, California.

The scope of the survey addressed safety issues concerning operations, management, facilities, and equipment among other audited aspects of the Skywatch Unit. One of the findings as a result of the survey stated that the Skywatch "...facilities are crowded but well organized and used."[28] The

survey also noted that the Department was in the "...development stage of a new facility that will ease the overcrowding and add needed facilities."[29]

The proposed construction of 10,500 square feet of building space includes 8,000 square feet of hangar area and 2,500 square feet of office space and locker rooms. The proposed building site is approximately 2.3 acres which would allow on-site bulk fuel storage to reduce the O&M costs of operation, and to accommodate expansion of the program for many years should additional demands, personnel, and equipment be placed within this unit.

5-Year Priority: New Storage Facility

Cost: $ 3,000,000

The Department currently stores specialized and tactical equipment in a number of different locations around the City. These locations have varying levels of security which creates a potential problem of theft and vandalism to City property.

To adequately secure these items and avoid costly replacements if theft or property damage were to occur, a 15,000 square foot secure facility is proposed to house a number of items in a central location.

The proposed facility would be gated, alarmed, and provide video surveillance with a CardLoc entry system to monitor access. The proposed facility would allow for the storage of the following equipment:

- Special Weapons and Tactics (SWAT) unit bus and Armored Rescue Vehicle,
- The new Mobile Command Vehicle,
- The Police Activities League bus and vans,
- The Explosives Ordinance Disposal unit vehicles, bomb tubs, robot and other anti-terrorism equipment,
- Chemical crowd dispersal agents, riot shields, and specialized equipment for the Mobile Field Force,
- Various Radar Display Boards used throughout the City,
- A 25' DUI Enforcement Trailer, and
- Additional equipment as needed for the Department.

SUMMARY OF INFRASTRUCTURE PROJECTS COSTS

Priority	Project ID	Description	Est. Cost
Immediate	CE District Substation	New construction. @ 9,400 sq.ft., Administrative offices, public areas and dressing station for all district law enforcement operations.	$4,800,000
Immediate	SE District Substation	New construction. @ 9,400 sq.ft., Administrative offices, public areas and dressing station for all district law enforcement operations.	$4,800,000
Immediate	NW District Substation	New construction. @ 9,400 sq.ft., Administrative offices, public areas and dressing station for all district law enforcement operations.	$4,800,000
Immediate	*9-1-1 Dispatch Center	*New Construction. @ 15,125 sq. ft., 9-1-1 Dispatch Center utilizing current technology and Includes $2,349,930 in new energy efficient equipment.	*$10,073,208
Immediate	*Property & Evidence Secure Facility	*New Construction. @ 21,200 sq. ft. Secure property and evidence storage facility meeting State/Fed guidelines for law enforcement use.	*$10,825,356
Immediate	*HQ-Annex Security Upgrade	*New security controls for Police Department HQ, Annex and parking areas.	*$ 330,000
Immediate	*Training Facility	*Phased development and expansion of the Fresno Police Department's Regional Training Facility	*$6,000,000
Immediate	*Prisoner Holding/Field Evidence Collection/Forensic Lab	*Expansion of the Technical Services Bureau to: 1. Expand prisoner holding and processing capabilities, 2. Increase capacity for field evidence collection, 3. Phased development of a Forensic Lab	*$10,000,000
2008	New District Substation	Based on population Projections, new construction. @ 9,400 sq.ft., Administrative offices, public areas and dressing station for all district law enforcement operations.	$4,800,000
2008	SKYWATCH Flight Center	New Construction. @ 10,500 sq. ft. Secure hangar facility and administrative office spaces.	$ 2,876,575
2008	*Storage Space	*New Construction. @ 15,000 sq. ft. Secure property storage facility for SWAT, EOD, and Mobile Command equipment.	*$3,000,000
		TOTAL:	**$62,305,139**

*** NOTE:** The capital projects designated by an asterisk may be combined with Fresno Fire Department proposed capital projects as a cost savings measure for construction, operation, and maintenance. This possibility is currently being explored.

CHAPTER 8: HOMELAND SECURITY NEEDS

Background

The role of local law enforcement has been significantly expanded since the events of September 11, 2001. Since that date, local governments have had to perform a number of tasks that were once the responsibility of the Federal and State governments. The increased responsibility of local law enforcement, as an integrated approach to domestic security, have real costs that has been shouldered, for the most part, through local government agency budgets.

These costs include local law enforcement participation in monitoring and intelligence gathering operations, responses to weapons of mass destruction events, coordination and ongoing training in responses to a wide variety of potential terrorism incidents and, when the National Threat Advisory is elevated, to actively protect various sites around the City of Fresno which have been identified as potential targets for terrorism.

The costs of these programs are being absorbed by local law enforcement. According to an article by Dibya Sarkar dated April 7, 2003: "U.S. cities are spending about $70 million weekly on additional homeland security measures, according to projections based on a new U.S. Conference of Mayors survey."[30] The national conference, which represents cities with populations of 30,000 or more, surveyed 145 politically and geographically diverse cities ranging in population from 21,000 to 8 million. Since Sept. 11, 2001, those cities have been spending, as a group, more than $21.4 million per week on top of what they were already spending for homeland security, according to the survey.[31] Although these cost projections are based on national figures, the costs of providing Homeland Security in the City of Fresno is easily quantifiable.

The Cost to Fresno

The benefit of the Homeland Security efforts by the Fresno Police Department, the Fresno Fire Department, and the other emergency agencies that train and respond to terrorist threats is immeasurable. There are no costs too high to provide the maximum level of protection from, and the maximum emergency response capabilities to, acts of domestic terrorism. The expense, however, of providing these services typically means cutting costs elsewhere. Law enforcement budgets, especially this year and for the foreseeable future, are not able to absorb these new expenses, without transferring the money from other budgeted expenditures, or by carrying personnel vacancies to balance operational expenses. Either solution degrades the ability of the Department to provide a full range of law enforcement services, at a time when public demand for service is at an all time high.

The costs for Homeland Security that are being absorbed by the City of Fresno can be categorized into three basic areas. First there are costs associated with members of the Department that have

been called to active military duty. Secondly, there are the cost to respond to acts of terrorism locally. Finally, there are projected costs to implement an Emergency Deployment should the Fresno Police Department have to respond to a local act of terrorism.

A. Military Leave.

A Fresno Police Department payroll records analysis shows that between September 11, 2001 through the end of May, 2003, there were an average of 10-12 Fresno Police Department personnel on paid military leave. Many of these personnel were sworn police officers assigned to patrol. The total cost expended for military and special military leave to date is $227,144.45 and has accounted for an aggregate absence of over 12,600 hours.

These costs are compounded as well. For every patrol officer on military leave, minimum staffing levels were negatively impacted. Minimum staffing is the minimum number of officers per shift per district that can effectively provide emergency services for the community. Minimum staffing is also effected by annual vacation, sick leave, long-term absences, and held personnel vacancies. The effect of having as many as 20 Department members on military leave, along with the other mentioned leaves provided by the City, causes unbudgeted overtime to be incurred to fulfill the staffing needs of the patrol function.

A corollary effect is the reassignment of investigative personnel to meet patrol needs. Last year, some investigative positions went unfilled and other investigators were pulled from their investigative responsibilities to meet minimum staffing needs. This causes a backlog of active investigations as case loads are reassigned to detectives that remain in those units. Although it is difficult to apportion overtime expenditures specifically to military leave, or to determine the increase in the backlog of investigative cases, anecdotal information from employees suggests a direct negative effect on both as a result staffing decreases due to long term military leave.

B. Anti Terrorism Responses

In response to the additional need for Domestic Security, the Fresno Police Department combined the Explosive Ordinance Disposal Team (EOD) with the Special Investigations Bureau's Intelligence Unit to create the Anti Terrorism Unit. This unit was formed to work more closely with other local, state, and federal emergency responders in identifying, investigation, and responding to potential terrorist activities, groups or individuals.

Through payroll records, a comparison of activity and expenses can be determined for the EOD (Anti Terrorism Unit), In the year prior to September 11, 2001, the EOD Team had two members respond to a total of four calls for service costing the City $620.53 in time earned, and $85.59 in actual pay. Although the EOD team was deactivated for a period of time, the calls for EOD service per year are consistently low.

Since September 11, 2001, however, the Anti Terrorism Unit has compiled more than 690 hours of call outs (excluding the commander of the unit who is not reported but responds to each call out as needed) for a total of $23,804.65 in cash paid for these calls and $11,176.15 in time earned for these calls. In comparison, the pre September 11, 2001 costs for EOD response of $706.12 has been increased to a cost to the Department of nearly $34,000.00.

In addition to the direct overtime costs, the Fresno Police Department hired a permanent part-time employee to supervise the Anti Terrorism efforts in March 2003. The retired Sergeant, hired as an hourly wage employee at $31.55/hr., earned over $10,000 in the two months that he was employed. Although this position is now vacant, filling this position would cost the Department over $60,000 in additional annual costs, which are directly related to Homeland Security and the Anti Terrorism activities.

C. Future Costs of Homeland Security

The Fresno Police Department has spent a significant amount of time preparing for large scale disasters and terrorist attacks. Under the Department's Emergency Operations Plan, immanent or actual terrorist attacks within this jurisdiction could cause the Department to go into a Full Emergency Deployment operational status. This would result in assigning all available officers to two platoons for 12 hour shifts during the duration of the emergency.

In a memorandum prepared for this contingency, it was determined that the cost for such a Full Emergency Deployment would result in 44 hours of overtime per officer/sergeant per week. This would also allow 225 officers and 35 sergeants to be available 24 hours a day, at a cost of $800,000 per week in additional overtime. Although there are limited circumstances were a Full Emergency Deployment could be utilized, this represents the greatest number of sworn officers that are currently available for the most significant events warranting this type of police response.

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CHAPTER 9: SUMMARY OF PERSONNEL COSTS

The following table projects personnel, equipment, and vehicle costs in five year increments calculated on the following assumptions:

1. That the population projections, as prepared by the Information Services Bureau are correct,
2. That personnel, equipment, and vehicle costs will continue to increase each year by 3%,
3. Non-sworn support hiring will remain at current proportions,
4. Sworn hiring will either maintain a 1.67 per 1000 population ratio, or increase to 2.0 per 1000 population ratio. No cost or personnel projections were made to achieve the national average of 2.3% per 1,000 population ratio,
5. The base was set at 2003 levels (745 Sworn, 395 Non-Sworn authorized positions),
6. Each cost represented as a total would be added to the previous years budget as an additional cost for additional personnel, equipment and vehicles,
7. That the City would maintain the current 2.5 sworn officers per patrol vehicle, and
8. That O & M vehicle costs reflect the ten year historical rate of increase projected through 2025 and are reported in this document for new acquisitions only.

2005 1.6 Ratio **Projected Population:**	**479,372**	
Additional Non-Sworn Hired (2003-2005):	4	
Additional Non-Sworn Personnel Costs:		$199,051.98
Sworn Total at 1.6 per 1000	801	
Additional Sworn Hired (2003-2005):	56	
Salary+Fringe for Additional Sworn:		$4,735,173.80
Equipment for Additional Sworn:		$166,219.14
Additional Patrol Vehicles Purchased:	22	
Additional Vehicles Total Purchase Price:		$1,186,318.16
Total O&M for New Vehicles Purchased:		$223,745.66
	Total:	**$6,510,508.74**

2005 2.0 Ratio **Projected Population:**	**479,372**	
Additional Non-Sworn Hired (2003-2005):	4	
Additional Non-Sworn Personnel Costs:		$199,051.98
Sworn Total at 2.0 per 1000	959	
Additional Sworn Hired (2003-2005):	214	
Salary+Fringe for Additional Sworn:		$17,970,557.94
Equipment for Additional Sworn:		$630,821.76
Additional Patrol Vehicles Purchased:	86	
Additional Vehicles Total Purchase Price:		$4,502,221.05
Total O&M for New Vehicles Purchased:		$849,141.89
	Total:	**$24,151,794.62**

2010 1.6 Ratio Projected Population:	**545,473**	
Additional Non-Sworn Hired (2005-2010)	55	
Additional Non-Sworn Personnel Costs:		$3,172,892.23
Sworn Total at 1.6 per 1000	911	
Additional Sworn Hired (2005-2010):	110	
Salary+Fringe for Additional Sworn:		$10,380,597.37
Equipment for Additional Sworn:		$364,390.85
Additional Patrol Vehicles Purchased:	44	
Additional Vehicles Total Purchase Price:		$2,600,684.08
Total O&M for New Vehicles Purchased:		$490,502.30
	Total:	**$ 17,009,066.83**
2010 2.0 Ratio Projected Population:	**545,473**	
Additional Non-Sworn Hired (2005-2010)	55	
Additional Non-Sworn Personnel Costs:		$3,172,892.23
Sworn Total at 2.0 per 1000	1091	
Additional Sworn Hired (2005-2010):	132	
Salary+Fringe for Additional Sworn:		$12,457,865.30
Equipment for Additional Sworn:		$437,309.33
Additional Patrol Vehicles Purchased:	53	
Additional Vehicles Total Purchase Price:		$2,564,910.58
Total O&M for New Vehicles Purchased:		$588,657.03
	Total:	**$19,221,634.47**
2015 1.6 Ratio Projected Population:	**619,928**	
Additional Non-Sworn Hired (2010-2015)	62	
Additional Non-Sworn Personnel Costs:		$4,146,392.83
Sworn Total at 1.6 per 1000	1035	
Additional Sworn Hired (2010-2015):	124	
Salary+Fringe for Additional Sworn:		$13,570,769.92
Equipment for Additional Sworn:		$476,375.69
Additional Patrol Vehicles Purchased:	50	
Additional Vehicles Total Purchase Price:		$3,199,928.16
Total O&M for New Vehicles Purchased:		$641,243.82
	Total:	**$22,034,710.42**

2015 2.0 Ratio Projected Population:	**619,928**	

Additional Non-Sworn Hired (2010-2015)	62	
Additional Non-Sworn Personnel Costs:		$4,146,392.83
Sworn Total at 2.0 per 1000	1240	
Additional Sworn Hired (2010-2015):	149	
Salary+Fringe for Additional Sworn:		$16,309,911.55
Equipment for Additional Sworn:		$572,527.98
Additional Patrol Vehicles Purchased:	60	
Additional Vehicles Total Purchase Price:		$4,086,174.03
Total O&M for New Vehicles Purchased:		$770,673.29
	Total:	**$25,885,679.68**

2020	**1.6 Ratio**	**Projected Population:**	**704,381**
Total Non-Sworn Hired (2015-2020)		70	
Additional Non-Sworn Personnel Costs:			$5,427,038.70
Sworn Total at 1.6 per 1000		1176	
Additional Sworn Hired (2015-2020):		141	
Salary+Fringe for Additional Sworn:			$17,886,396.41
Equipment for Additional Sworn:			$627,867.43
Additional Patrol Vehicles Purchased:		56	
Additional Vehicles Total Purchase Price:			$4,481,135.79
Total O&M for New Vehicles Purchased:			$845,165.10
		Total:	**$29,267,603.43**

2020	**2.0 Ratio**	**Projected Population:**	**704,381**
Additional Non-Sworn Hired (2015-2020)		70	
Additional Non-Sworn Personnel Costs:			$5,427,038.70
Sworn Total at 2.0 per 1000		1409	
Additional Sworn Hired (2015-2020):		169	
Salary+Fringe for Additional Sworn:			$21,449,687.39
Equipment for Additional Sworn:			$752,468.28
Additional Patrol Vehicles Purchased:		68	
Additional Vehicles Total Purchase Price:			$5,373,858.42
Total O&M for New Vehicles Purchased:			$1,013,537.15
		Total:	**$34,016,589.94**

2025	**1.6 Ratio**	**Projected Population:**	**800,317**
Additional Non-Sworn Hired (2020-2025)		80	

Additional Non-Sworn Personnel Costs:		$7,190,200.31
Sworn Total at 1.6 per 1000	1337	
Additional Sworn Hired (2020-2025):	161	
Salary+Fringe for Additional Sworn:		$23,686,548.15
Equipment for Additional Sworn:		$831,470.56
Additional Patrol Vehicles Purchased:	64	
Additional Vehicles Total Purchase Price:		$5,934,266.26
Total O&M for New Vehicles Purchased:		$1,119,232.93
	Total:	**$38,761,718.21**

2025	**2.0 Ratio**	**Projected Population:**	**800,317**
Additional Non-Sworn Hired (2020-2025)		80	
Additional Non-Sworn Personnel Costs:			$7,190,200.31
Sworn Total at 2.0 per 1000		1601	
Additional Sworn Hired (2020-2025):		192	
Salary+Fringe for Additional Sworn:			$28,253,562.21
Equipment for Additional Sworn:			$991,786.78
Additional Patrol Vehicles Purchased:		77	
Additional Vehicles Total Purchase Price:			$7,078,454.48
Total O&M for New Vehicles Purchased:			$1,335,032.74
		Total:	**$44,849,036.52**

ENDNOTES

1. Mayor's Council of Economic Advisors Task Force Report, Executive Summary, pg. 6 Graph 7.

2. City of Fresno 2025 General Plan, Chapter. 2, pg.5

3. Ibid.

4. Ibid.

5. Ibid.

6. City of Fresno 2025 General Plan, Chapter. 2, pg. 6

7. Ibid.

8. City of Fresno 2025 General Plan, Chapter 2, pg 6.

9. City of Fresno 2025 General Plan, Chapter 2, pg 5-6.

10. City of Fresno 2025 General Plan, Chapter 2, pg 8.

11. Ibid.

12. Walker, Samuel and Katz, Charles M., *The Police in America*, McGraw Hill Publishing, 2002 pgs. 89-90.

13., Quinlivan, James T., *Force Requirements in Stability Operations*, reprinted from Parameters, Winter 1995, pgs. 59-69.

14. Quinlivan, James T., *Force Requirements in Stability Operations*, reprinted from Parameters, Winter 1995, pg. 60.

15. Ibid.

16. Quinlivan, James T., *Force Requirements in Stability Operations*, reprinted from Parameters, Winter 1995, pg. 61. Citing Earl F. Ziemke, *The United States Army in the Occupation of Germany, 1944-1946* (Washington, GPO, 1975), p. 341

17. Exhibit 4

18. City of Fresno Uniform Crime Reporting Statistics 1986-2002, prepared by the Information Services Bureau, City of Fresno Police Department

19. City of Fresno Uniform Crime Reporting Statistics 1986-2002, prepared by the Information Services Bureau, City of Fresno Police Department

20. Morgan Quinto Press citing the FBI "Crime in the United States 2001"

21. Macias Consulting Group, Ltd., "*Operational Review of the Fresno Police Department, Final Report*" January 31, 2003, pg. 76.

22. Ibid.

23. Macias Consulting Group, Ltd., "*Operational Review of the Fresno Police Department, Final Report*" January 31, 2003, pg. 77.

24. Ibid.

25. US Department of Labor, Bureau of Labor Statistics, Consumer Price Index 1913-present, ftp://ftp.bls.gov/pub/special.requests/cpi/cpiai.txt

26. Latta, Joseph T., *Evidence Control System Property Room Review and Audit, City of Fresno Police Department"*, October 19, 2001, Section 7, pg. 7-4.

27. Ibid.

28. Shuler, J., and Associates, Ltd., "*Safety Survey, The City of Fresno Police Department Skywatch Operations Unit*," May 20, 2002, Section 5, pg. 5.

29. Ibid.

30. Sarker, Dibya, *High Alert Status,* Federal Computer Weekly Magazine, April 7, 2003

31. Ibid.

EXHIBITS

City of Fresno Population Projection

Year	Population		Actual Delta	Revised Delta	Rev Cum. Delta
1980	218,200		NA	NA	NA
1981	231,900	13,700	6.28%	6.28%	6.28%
1982	246,200	14,300	6.17%	6.17%	6.22%
1983	256,000	9,800	3.98%	3.98%	5.48%
1984	270,900	14,900	5.82%	5.82%	5.56%
1985	281,500	10,600	3.91%	3.91%	5.23%
1986	293,900	12,400	4.40%	4.40%	4.86%
1987	309,300	15,400	5.24%	5.24%	4.67%
1988	320,000	10,700	3.46%	3.46%	4.57%
1989	334,300	14,300	4.47%	4.47%	4.30%
1990	350,800	16,500	4.94%	4.94%	4.50%
1991	368,300	17,500	4.99%	4.99%	4.62%
1992	391,000	22,700	6.16%	6.16%	4.80%
1993	392,900	1,900	0.49%	0.49%	4.21%
1994	402,100	9,200	2.34%	2.34%	3.78%
1995	405,100	3,000	0.75%	0.75%	2.95%
1996	405,100	-	0.00%	0.00%	1.95%
1997	406,937	1,837	0.45%	0.45%	0.81%
1998	406,937	-	0.00%	0.00%	0.71%
1999	416,000	9,063	2.23%	2.23%	0.69%
2000	420,594	4,594	1.10%	1.10%	0.76%
2001	427,652	7,058	1.68%	1.68%	1.09%
2002	448,453	20,801	4.86%	4.86%	1.97%
2003	457,309	8,856	1.97%	1.97%	2.37%
2004	468,145	10,837	2.37%	2.37%	2.40%
2005	479,372	11,227	2.40%	2.40%	2.66%
2006	492,109	12,737	2.66%	2.66%	2.85%
2007	506,147	14,038	2.85%	2.85%	2.45%
2008	518,550	12,403	2.45%	2.45%	2.55%
2009	531,750	13,200	2.55%	2.55%	2.58%
2010	545,473	13,723	2.58%	2.58%	2.62%
2011	559,750	14,277	2.62%	2.62%	2.61%
2012	574,355	14,606	2.61%	2.61%	2.56%
2013	589,063	14,707	2.56%	2.56%	2.58%
2014	604,277	15,214	2.58%	2.58%	2.59%
2015	619,928	15,652	2.59%	2.59%	2.59%
2016	635,997	16,069	2.59%	2.59%	2.59%
2017	652,450	16,453	2.59%	2.59%	2.58%
2018	669,300	16,850	2.58%	2.58%	2.59%
2019	686,614	17,314	2.59%	2.59%	2.59%
2020	704,381	17,768	2.59%	2.59%	2.59%
2021	722,605	18,224	2.59%	2.59%	2.59%
2022	741,294	18,688	2.59%	2.59%	2.59%
2023	760,465	19,171	2.59%	2.59%	2.59%
2024	780,137	19,672	2.59%	2.59%	2.59%
2025	800,317	20,181	2.59%	2.59%	2.59%

Based on 4 Year rolling average. This is the methodology that appears consistent with the various projections from Development and the State of California Finance Department as well as, the California Institute.

However, for which none agree with the other. This estimate projects a population level that falls within a viable midrange of the above without exagerating the population figures.

Year	County Increase 1.86%	City Proportion 61.00%
2000	821,797	501,296
2001	837,043	510,596
2002	852,572	520,069
2003	868,389	529,717
2004	884,499	539,545
2005	900,909	549,554
2006	917,622	559,750
2007	934,646	570,134
	951,986	580,711
	969,647	591,485
	987,636	602,458
	005,958	613,635
	024,621	625,019
	043,630	636,614
	062,991	648,425
	082,712	660,454
	02,799	672,707
	23,258	685,187
	44,096	697,899
	65,322	710,846
	86,941	724,034
2021	1,208,961	737,466
2022	1,231,390	751,148
2023	1,254,235	765,083
2024	1,277,503	779,277
2025	1,301,204	793,734
ACTUALS	1,301,204	793,734

Note the significant disparity to the actual number *(left) to the* California Institute Projection (right)!

The calculations on the left reflect much more plausible and defensible justification given that the projections are based

Average	3.35%		
1st St Dev	2.19%	5.54%	68.3% Probability
2nd St Dev	**4.38%**	**7.73%**	**95.5% Probability**
3rd St Dev	6.57%	9.92%	99.7% Probability

Change from 2002 to 2025 **78.46% Using 95% Probable Projection**

Other population based on City of Fresno Development Department Statistical Abstract

Exhibit 1

City of Fresno Population Projection

Year	Population		Actual Delta	Revised Delta	Rev Cum. Delta
1980	218,200		NA	NA	NA
1981	231,900	13,700	6.28%	6.28%	6.28%
1982	246,200	14,300	6.17%	6.17%	6.22%
1983	256,000	9,800	3.98%	3.98%	5.48%
1984	270,900	14,900	5.82%	5.82%	5.56%
1985	281,500	10,600	3.91%	3.91%	5.23%
1986	293,900	12,400	4.40%	4.40%	4.86%
1987	309,300	15,400	5.24%	5.24%	4.67%
1988	320,000	10,700	3.46%	3.46%	4.57%
1989	334,300	14,300	4.47%	4.47%	4.30%
1990	350,800	16,500	4.94%	4.94%	4.50%
1991	368,300	17,500	4.99%	4.99%	4.62%
1992	391,000	22,700	6.16%	6.16%	4.80%
1993	392,900	1,900	0.49%	0.49%	4.21%
1994	402,100	9,200	2.34%	2.34%	3.78%
1995	405,100	3,000	0.75%	0.75%	2.95%
1996	405,100	-	0.00%	0.00%	1.95%
1997	406,937	1,837	0.45%	0.45%	0.81%
1998	406,937	-	0.00%	0.00%	0.71%
1999	416,000	9,063	2.23%	2.23%	0.69%
2000	420,594	4,594	1.10%	1.10%	0.76%
2001	427,652	7,058	1.68%	1.68%	1.09%
2002	448,453	20,801	4.86%	4.86%	1.97%
2003	457,309	8,856	1.97%	1.97%	2.37%
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2005	479,372	11,227	2.40%	2.40%	2.66%
2006	492,109	12,737	2.66%	2.66%	2.85%
2007	506,147	14,038	2.85%	2.85%	2.45%
2008	518,550	12,403	2.45%	2.45%	2.55%
2009	531,750	13,200	2.55%	2.55%	2.58%
2010	545,473	13,723	2.58%	2.58%	2.62%
2011	559,750	14,277	2.62%	2.62%	2.61%
2012	574,355	14,606	2.61%	2.61%	2.56%
2013	589,063	14,707	2.56%	2.56%	2.58%
2014	604,277	15,214	2.58%	2.58%	2.59%
2015	619,928	15,652	2.59%	2.59%	2.59%
2016	635,997	16,069	2.59%	2.59%	2.59%
2017	652,450	16,453	2.59%	2.59%	2.58%
2018	669,300	16,850	2.58%	2.58%	2.59%
2019	686,614	17,314	2.59%	2.59%	2.59%
2020	704,381	17,768	2.59%	2.59%	2.59%
2021	722,605	18,224	2.59%	2.59%	2.59%
2022	741,294	18,688	2.59%	2.59%	2.59%
2023	760,465	19,171	2.59%	2.59%	2.59%
2024	780,137	19,672	2.59%	2.59%	2.59%
2025	800,317	20,181	2.59%	2.59%	2.59%

Based on 4 Year rolling average. This is the methodology that appears consistent with the various projections from Development and the State of California Finance Department as well as, the California Institute.

However, for which none agree with the other. This estimate projects a population level that falls within a viable midrange of the above without exagerating the population figures.

Year	County Increase 1.86%	City Proportion 61.00%
2000	821,797	501,296
2001	837,043	510,596
2002	852,572	520,069
2003	868,389	529,717
2004	884,499	539,545
2005	900,909	549,554
2006	917,622	559,750
2007	934,646	570,134
2008	951,986	580,711
2009	969,647	591,485
2010	987,636	602,458
2011	1,005,958	613,635
2012	1,024,621	625,019
2013	1,043,630	636,614
2014	1,062,991	648,425
2015	1,082,712	660,454
2016	1,102,799	672,707
2017	1,123,258	685,187
2018	1,144,096	697,899
2019	1,165,322	710,846
2020	1,186,941	724,034
2021	1,208,961	737,466
2022	1,231,390	751,148
2023	1,254,235	765,083
2024	1,277,503	779,277
2025	1,301,204	793,734
ACTUALS	1,301,204	793,734

Note the significant disparity to the actual number (left) to the California Institute Projection (right)!

The calculations on the left reflect much more plausible and defensible justification given that the projections are based

Average	3.35%		
1st St Dev	2.19%	5.54%	68.3% Probability
2nd St Dev	**4.38%**	***7.73%***	***95.5% Probability***
3rd St Dev	6.57%	9.92%	99.7% Probability

Change from 2002 to 2025 **78.46% Using 95% Probable Projection**

Other population based on City of Fresno Development Department Statistical Abstract

Exhibit 1

Total UCR Crimes As Reported to the Department of Justice, Federal Bureau of Investigation (1983-2002)					Total Crimes as Indexed against Projected Population Increases on a Year by Year basis.					Total Crimes as Indexed against Projected Calls for Service on a Year by Year basis.					Total Crimes
Year	Total Crimes Total	Actual Delta	Revised Delta	Rev Cum. Delta	Pop. per Total Crime (Index)	Actual Delta	Revised Delta	Rev Cum. Delta	Projected Person Crimes	Pop. per Total Crime (Index)	Actual Delta	Revised Delta	Rev Cum. Delta	Projected Total Crimes	Final Projected Averages
1983	25,700	NA	NA	NA	9.96	NA	NA	NA	NA	NA					NA
1984	27,136	5.59%	5.59%	5.59%	9.98	0.22%	0.22%	0.22%	27136	NA	NA	NA	NA	NA	NA
1985	28,989	6.83%	6.83%	6.21%	9.71	-2.73%	-2.73%	-1.25%	28989	8.35	NA	NA	NA	NA	NA
1986	33,366	15.10%	15.10%	9.17%	8.81	-9.29%	-9.29%	-3.93%	33366	7.94	-4.89%	-4.89%	-4.89%	33366.00	33,366
1987	32,260	-3.31%	-3.31%	6.05%	9.59	8.85%	8.85%	-0.74%	32260	9.74	22.69%	2.31%	-1.29%	32260.00	32,260
1988	34,270	6.23%	6.23%	6.09%	9.34	-2.61%	-2.61%	-1.11%	34270	9.10	-6.63%	-6.63%	-3.07%	34270.00	34,270
1989	37,085	8.21%	8.21%	6.44%	9.01	-3.46%	-3.46%	-1.50%	37085	8.86	-2.57%	-2.57%	-2.94%	37085.00	37,085
1990	37,594	1.37%	1.37%	5.72%	9.33	3.51%	3.51%	-0.79%	37594	8.89	0.34%	0.34%	-2.29%	37594.00	37,594
1991	43,966	16.95%	16.95%	7.12%	8.38	-10.23%	-10.23%	-1.97%	43966	7.81	-12.20%	-12.20%	-3.94%	43966.00	43,966
1992	45,143	2.68%	2.68%	6.63%	8.66	3.40%	3.40%	-1.37%	45143	7.86	0.66%	0.66%	-3.28%	45143.00	45,143
1993	42,244	-6.42%	-6.42%	5.32%	9.30	7.38%	7.38%	-0.50%	42244	8.85	12.52%	12.52%	-1.31%	42244.00	42,244
1994	46,939	11.11%	11.11%	5.85%	8.57	-7.89%	-7.89%	-1.17%	46939	8.37	-5.35%	-5.35%	-1.76%	46939.00	46,939
1995	47,587	1.38%	1.38%	5.48%	8.51	-0.63%	-0.63%	-1.12%	47587	8.27	-1.22%	-1.22%	-1.70%	47587.00	47,587
1996	42,803	-10.05%	-10.05%	4.28%	9.46	11.18%	11.18%	-0.18%	42803	8.45	2.14%	2.14%	-1.35%	42803.00	42,803
1997	38,745	-9.48%	-9.48%	3.30%	10.50	10.97%	10.97%	0.62%	38745	9.44	11.74%	11.74%	-0.26%	38745.00	38,745
1998	32,915	-15.05%	-15.05%	2.08%	12.36	17.71%	17.71%	1.76%	32915	11.35	20.28%	20.28%	1.32%	32915.00	32,915
1999	29,577	-10.14%	-10.14%	1.31%	14.06	13.76%	13.76%	2.51%	29577	12.40	9.24%	9.24%	1.88%	29577.00	29,577
2000	33,342	12.73%	12.73%	1.98%	12.61	-10.31%	-10.31%	1.76%	33342	11.08	-10.67%	-10.67%	1.05%	33342.00	33,342
2001	35,170	5.48%	5.48%	2.18%	12.16	-3.61%	-3.61%	1.46%	35170	11.03	-0.44%	-0.44%	0.95%	35170.00	35,170
2002	34,615	-1.58%	-1.58%	1.98%	12.96	6.55%	6.55%	1.73%	34615	11.43	3.64%	3.64%	1.11%	34615.00	34,615
2003	35,301	1.98%	1.98%	1.98%	13.18	1.73%	1.73%	1.73%	34700	11.56	1.11%	1.11%	1.11%	34737.93	34,913
2004	36,000	1.98%	1.98%	1.98%	13.41	1.73%	1.73%	1.73%	34920	11.69	1.11%	1.11%	1.11%	35145.56	35,355
2005	36,713	1.98%	1.98%	1.98%	13.64	1.73%	1.73%	1.73%	35151	11.82	1.11%	1.11%	1.11%	35697.02	35,854
2006	37,440	1.98%	1.98%	1.98%	13.87	1.73%	1.73%	1.73%	35473	11.95	1.11%	1.11%	1.11%	36052.42	36,322
2007	38,181	1.98%	1.98%	1.98%	14.11	1.73%	1.73%	1.73%	35866	12.08	1.11%	1.11%	1.11%	36421.35	36,823
2008	38,937	1.98%	1.98%	1.98%	14.36	1.73%	1.73%	1.73%	36122	12.22	1.11%	1.11%	1.11%	36854.89	37,305
2009	39,708	1.98%	1.98%	1.98%	14.60	1.73%	1.73%	1.73%	36413	12.35	1.11%	1.11%	1.11%	37295.16	37,806
2010	40,495	1.98%	1.98%	1.98%	14.86	1.73%	1.73%	1.73%	36719	12.49	1.11%	1.11%	1.11%	37705.76	38,307
2011	41,297	1.98%	1.98%	1.98%	15.11	1.73%	1.73%	1.73%	37042	12.63	1.11%	1.11%	1.11%	38130.82	38,823
2012	42,115	1.98%	1.98%	1.98%	15.37	1.73%	1.73%	1.73%	37364	12.77	1.11%	1.11%	1.11%	38570.59	39,350
2013	42,949	1.98%	1.98%	1.98%	15.64	1.73%	1.73%	1.73%	37670	12.91	1.11%	1.11%	1.11%	39011.85	39,877
2014	43,799	1.98%	1.98%	1.98%	15.91	1.73%	1.73%	1.73%	37988	13.06	1.11%	1.11%	1.11%	39453.23	40,414
2015	44,667	1.98%	1.98%	1.98%	16.18	1.73%	1.73%	1.73%	38311	13.20	1.11%	1.11%	1.11%	39902.61	40,960
2016	45,551	1.98%	1.98%	1.98%	16.46	1.73%	1.73%	1.73%	38638	13.35	1.11%	1.11%	1.11%	40358.27	41,516
2017	46,454	1.98%	1.98%	1.98%	16.74	1.73%	1.73%	1.73%	38965	13.50	1.11%	1.11%	1.11%	40817.99	42,079
2018	47,373	1.98%	1.98%	1.98%	17.03	1.73%	1.73%	1.73%	39293	13.65	1.11%	1.11%	1.11%	41282.45	42,650

2019	48,312	1.98%	1.98%	1.98%	17.33	1.73%	1.73%	1.73%	39626	13.80	1.11%	1.11%	1.11%	41752.85	43,230
2020	49,268	1.98%	1.98%	1.98%	17.63	1.73%	1.73%	1.73%	39962	13.95	1.11%	1.11%	1.11%	42228.66	43,820
2021	50,244	1.98%	1.98%	1.98%	17.93	1.73%	1.73%	1.73%	40301	14.11	1.11%	1.11%	1.11%	42709.65	44,418
2022	51,239	1.98%	1.98%	1.98%	18.24	1.73%	1.73%	1.73%	40642	14.26	1.11%	1.11%	1.11%	43196.11	45,026
2023	52,254	1.98%	1.98%	1.98%	18.55	1.73%	1.73%	1.73%	40986	14.42	1.11%	1.11%	1.11%	43688.23	45,643
2024	53,289	1.98%	1.98%	1.98%	18.87	1.73%	1.73%	1.73%	41333	14.58	1.11%	1.11%	1.11%	44185.93	46,269
2025	54,344	1.98%	1.98%	1.98%	19.20	1.73%	1.73%	1.73%	41684	14.74	1.11%	1.11%	1.11%	44689.26	46,906

Averag	1.98%			1.73%				2.31%				
1st St I	9.21%	11.19%	68.3% Probability	8.47%	10.19%	68.3% Probability		10.00%	12.32%	68.3% Probability		
2nd St	**18.42%**	20.40%	**95.5% Probability**	**16.94%**	**18.66%**	**95.5% Probability**		**20.01%**	**22.32%**	**95.5% Probability**		
3rd St I	27.63%	29.61%	99.7% Probability	25.40%	27.13%	99.7% Probability		30.01%	32.32%	99.7% Probability		
Change from 2002 to 2025		**57.00%**			**20.42%**				**29.10%**			**35.51%**

Exhibit 2

	Person Crimes				Person Crimes as Indexed against Projected Population Increases on a Year by Year basis.					Person Crimes as Indexed against Projected Calls for Service on a Year by Year basis.					Person Crimes
Year	Person Crimes Total	Actual Delta	Revised Delta	Rev Cum. Delta	Pop. per Person Crime (Index)	Actual Delta	Revised Delta	Rev Cum. Delta	Projected Person Crimes	Pop. per Person Crime (Index)	Actual Delta	Revised Delta	Rev Cum. Delta	Projected Person Crimes	Final Projected Averages
1983	1,913	NA	NA	NA	133.82	NA	NA	NA	NA	NA					NA
1984	1,994	4.23%	4.23%	4.23%	135.86	1.52%	1.52%	1.52%	1994	NA	NA	NA	NA	NA	NA
1985	2,311	15.90%	15.90%	10.07%	121.81	-10.34%	-10.34%	-4.41%	2311	104.75	NA	NA	NA	NA	NA
1986	3,426	48.25%	4.47%	8.20%	85.79	-29.57%	-29.57%	-12.80%	3426	77.35	-26.16%	-26.16%	-26.16%	3426.00	3,426
1987	3,373	-1.55%	-1.55%	5.76%	91.70	6.89%	6.89%	-7.87%	3373	93.20	20.49%	20.49%	-2.83%	3373.00	3,373
1988	3,997	18.50%	18.50%	9.33%	80.06	-12.69%	-12.69%	-8.84%	3997	78.01	-16.30%	-16.30%	-7.32%	3997.00	3,997
1989	4,289	7.31%	7.31%	8.14%	77.94	-2.64%	-2.64%	-7.81%	4289	76.65	-1.74%	-1.74%	-5.93%	4289.00	4,289
1990	4,399	2.56%	2.56%	7.35%	79.75	2.31%	2.31%	-6.36%	4399	76.01	-0.83%	-0.83%	-4.91%	4399.00	4,399
1991	4,608	4.75%	4.75%	7.02%	79.93	0.23%	0.23%	-5.54%	4608	74.51	-1.97%	-1.97%	-4.42%	4608.00	4,608
1992	5,363	16.38%	16.38%	8.06%	72.91	-8.78%	-8.78%	-5.90%	5363	66.17	-11.19%	-11.19%	-5.39%	5363.00	5,363
1993	5,512	2.78%	2.78%	7.53%	71.28	-2.23%	-2.23%	-5.53%	5512	67.79	2.45%	2.45%	-4.41%	5512.00	5,512
1994	6,199	12.46%	12.46%	7.98%	64.87	-9.00%	-9.00%	-5.85%	6199	63.39	-6.49%	-6.49%	-4.64%	6199.00	6,199
1995	5,659	-8.71%	-8.71%	6.59%	71.59	10.36%	10.36%	-4.50%	5659	69.55	9.70%	9.70%	-3.20%	5659.00	5,659
1996	5,463	-3.46%	-3.46%	5.82%	74.15	3.59%	3.59%	-3.87%	5463	66.19	-4.83%	-4.83%	-3.35%	5463.00	5,463
1997	4,781	-12.48%	-12.48%	4.51%	85.12	14.78%	14.78%	-2.54%	4781	76.49	15.57%	15.57%	-1.77%	4781.00	4,781
1998	4,253	-11.04%	-11.04%	3.47%	95.68	12.41%	12.41%	-1.54%	4253	87.87	14.87%	14.87%	-0.49%	4253.00	4,253
1999	4,008	-5.76%	-5.76%	2.90%	103.79	8.48%	8.48%	-0.92%	4008	91.53	4.16%	4.16%	-0.16%	4008.00	4,008
2000	3,843	-4.12%	-4.12%	2.48%	109.44	5.45%	5.45%	-0.54%	3843	96.12	5.02%	5.02%	0.18%	3843.00	3,843
2001	4,082	6.22%	6.22%	2.69%	104.77	-4.28%	-4.28%	-0.75%	4082	95.04	-1.13%	-1.13%	0.10%	4082.00	4,082
2002	3,781	-7.37%	-7.37%	2.16%	118.61	13.21%	13.21%	-0.02%	3781	104.66	10.13%	10.13%	0.69%	3781.00	3,781
2003	3,863	2.16%	2.16%	2.16%	118.59	-0.02%	-0.02%	-0.02%	3856	105.39	0.69%	0.69%	0.69%	3810.29	3,843
2004	3,946	2.16%	2.16%	2.16%	118.57	-0.02%	-0.02%	-0.02%	3948	106.11	0.69%	0.69%	0.69%	3871.12	3,922
2005	4,031	2.16%	2.16%	2.16%	118.55	-0.02%	-0.02%	-0.02%	4044	106.85	0.69%	0.69%	0.69%	3948.30	4,008
2006	4,119	2.16%	2.16%	2.16%	118.53	-0.02%	-0.02%	-0.02%	4152	107.59	0.69%	0.69%	0.69%	4004.29	4,092
2007	4,208	2.16%	2.16%	2.16%	118.51	-0.02%	-0.02%	-0.02%	4271	108.33	0.69%	0.69%	0.69%	4062.18	4,180
2008	4,299	2.16%	2.16%	2.16%	118.49	-0.02%	-0.02%	-0.02%	4376	109.08	0.69%	0.69%	0.69%	4127.72	4,268
2009	4,391	2.16%	2.16%	2.16%	118.47	-0.02%	-0.02%	-0.02%	4488	109.83	0.69%	0.69%	0.69%	4194.49	4,358
2010	4,486	2.16%	2.16%	2.16%	118.45	-0.02%	-0.02%	-0.02%	4605	110.59	0.69%	0.69%	0.69%	4258.40	4,450
2011	4,583	2.16%	2.16%	2.16%	118.43	-0.02%	-0.02%	-0.02%	4726	111.36	0.69%	0.69%	0.69%	4324.42	4,545
2012	4,682	2.16%	2.16%	2.16%	118.42	-0.02%	-0.02%	-0.02%	4850	112.13	0.69%	0.69%	0.69%	4392.58	4,642

2013	4,784	2.16%	2.16%	2.16%	118.40	-0.02%	-0.02%	-0.02%	4975	112.90	0.69%	0.69%	0.69%	4461.41	4,740
2014	4,887	2.16%	2.16%	2.16%	118.38	-0.02%	-0.02%	-0.02%	5105	113.68	0.69%	0.69%	0.69%	4530.75	4,841
2015	4,993	2.16%	2.16%	2.16%	118.36	-0.02%	-0.02%	-0.02%	5238	114.47	0.69%	0.69%	0.69%	4601.52	4,944
2016	5,101	2.16%	2.16%	2.16%	118.34	-0.02%	-0.02%	-0.02%	5374	115.26	0.69%	0.69%	0.69%	4673.52	5,049
2017	5,211	2.16%	2.16%	2.16%	118.32	-0.02%	-0.02%	-0.02%	5514	116.06	0.69%	0.69%	0.69%	4746.52	5,157
2018	5,323	2.16%	2.16%	2.16%	118.30	-0.02%	-0.02%	-0.02%	5658	116.86	0.69%	0.69%	0.69%	4820.60	5,267
2019	5,438	2.16%	2.16%	2.16%	118.28	-0.02%	-0.02%	-0.02%	5805	117.67	0.69%	0.69%	0.69%	4895.92	5,380
2020	5,556	2.16%	2.16%	2.16%	118.26	-0.02%	-0.02%	-0.02%	5956	118.48	0.69%	0.69%	0.69%	4972.42	5,495
2021	5,676	2.16%	2.16%	2.16%	118.24	-0.02%	-0.02%	-0.02%	6111	119.30	0.69%	0.69%	0.69%	5050.08	5,612
2022	5,799	2.16%	2.16%	2.16%	118.22	-0.02%	-0.02%	-0.02%	6270	120.13	0.69%	0.69%	0.69%	5128.96	5,733
2023	5,924	2.16%	2.16%	2.16%	118.21	-0.02%	-0.02%	-0.02%	6433	120.96	0.69%	0.69%	0.69%	5209.08	5,856
2024	6,052	2.16%	2.16%	2.16%	118.19	-0.02%	-0.02%	-0.02%	6601	121.79	0.69%	0.69%	0.69%	5290.45	5,981
2025	6,183	2.16%	2.16%	2.16%	118.17	-0.02%	-0.02%	-0.02%	6773	122.63	0.69%	0.69%	0.69%	5373.09	6,110

Averag	4.47%				-0.02%					0.69%					
1st St	14.12%	18.58%	68.3% Probability		10.94%	10.93%	68.3% Probability			11.91%	12.60%	68.3% Probability			
2nd S	**28.23%**	32.70%	**95.5% Probability**		**21.88%**	**21.87%**	**95.5% Probability**			**23.82%**	**24.51%**	**95.5% Probability**			
3rd St	42.35%	46.82%	99.7% Probability		32.83%	32.81%	99.7% Probability			35.73%	36.42%	99.7% Probability			
Change from 2002 to 202			**63.52%**				**79.13%**					**42.11%**			**61.59%**

Exhibit 3

Property Crimes					Property Crimes as Indexed against Projected Population Increases on a Year by Year basis.					Property Crimes as Indexed against Projected Calls for Service on a Year by Year basis.					Property Crimes
Year	Person Crimes Total	Actual Delta	Revised Delta	Rev Cum. Delta	Pop. per Property Crime (Index)	Actual Delta	Revised Delta	Rev Cum. Delta	Projected Person Crimes	Pop. per Property Crime (Index)	Actual Delta	Revised Delta	Rev Cum. Delta	Projected Person Crimes	Final Projected Averages
1983	23,787	NA	NA	NA	10.76	NA	NA	NA	NA	NA					NA
1984	25,142	5.70%	5.70%	5.70%	10.77	0.12%	0.12%	0.12%	25142	NA	NA	NA	NA	NA	NA
1985	26,678	6.11%	6.11%	5.90%	10.55	-2.07%	-2.07%	-0.98%	26678	9.07	NA	NA	NA	NA	NA
1986	29,940	12.23%	12.23%	8.01%	9.82	-6.97%	-6.97%	-2.97%	29940	8.85	-2.45%	-2.45%	-2.45%	29940	29,940
1987	28,887	-3.52%	-3.52%	5.13%	10.71	9.08%	9.08%	0.04%	28887	10.88	22.95%	22.95%	10.25%	28887	28,887
1988	30,273	4.80%	4.80%	4.90%	10.57	-1.28%	-1.28%	-0.22%	30273	10.30	-5.36%	-5.36%	5.05%	30273	30,273
1989	32,796	8.33%	8.33%	5.61%	10.19	-3.57%	-3.57%	-0.78%	32796	10.02	-2.67%	-2.67%	3.12%	32796	32,796
1990	33,195	1.22%	1.22%	4.98%	10.57	3.67%	3.67%	-0.15%	33195	10.07	0.49%	0.49%	2.59%	33195	33,195
1991	39,358	18.57%	18.57%	6.68%	9.36	-11.45%	-11.45%	-1.56%	39358	8.72	-13.39%	-13.39%	-0.07%	39358	39,358
1992	39,780	1.07%	1.07%	6.06%	9.83	5.04%	5.04%	-0.83%	39780	8.92	2.26%	2.26%	0.26%	39780	39,780
1993	36,732	-7.66%	-7.66%	4.68%	10.70	8.82%	8.82%	0.14%	36732	10.17	14.03%	14.03%	1.98%	36732	36,732
1994	40,740	10.91%	10.91%	5.25%	9.87	-7.73%	-7.73%	-0.58%	40740	9.65	-5.18%	-5.18%	1.19%	40740	40,740
1995	41,928	2.92%	2.92%	5.06%	9.66	-2.11%	-2.11%	-0.70%	41928	9.39	-2.69%	-2.69%	0.80%	41928	41,928
1996	37,340	-10.94%	-10.94%	3.83%	10.85	12.29%	12.29%	0.30%	37340	9.68	3.16%	3.16%	1.01%	37340	37,340
1997	33,964	-9.04%	-9.04%	2.91%	11.98	10.44%	10.44%	1.02%	33964	10.77	11.20%	11.20%	1.86%	33964	33,964
1998	28,662	-15.61%	-15.61%	1.67%	14.20	18.50%	18.50%	2.19%	28662	13.04	21.09%	21.09%	3.34%	28662	28,662
1999	25,569	-10.79%	-10.79%	0.89%	16.27	14.59%	14.59%	2.96%	25569	14.35	10.04%	10.04%	3.82%	25569	25,569
2000	29,499	15.37%	15.37%	1.74%	14.26	-12.37%	-12.37%	2.06%	29499	12.52	-12.72%	-12.72%	2.72%	29499	29,499
2001	31,088	5.39%	5.39%	1.95%	13.76	-3.52%	-3.52%	1.75%	31088	12.48	-0.35%	-0.35%	2.52%	31088	31,088
2002	30,834	-0.82%	-0.82%	1.80%	14.54	5.73%	5.73%	1.96%	30834	12.83	2.85%	2.85%	2.54%	30834	30,834
2003	31,389	1.80%	1.80%	1.80%	14.83	1.96%	1.96%	1.96%	30839	13.16	2.54%	2.54%	2.54%	30512	30,913
2004	31,955	1.80%	1.80%	1.80%	15.12	1.96%	1.96%	1.96%	30963	13.50	2.54%	2.54%	2.54%	30439	31,119
2005	32,530	1.80%	1.80%	1.80%	15.42	1.96%	1.96%	1.96%	31096	13.84	2.54%	2.54%	2.54%	30485	31,370
2006	33,116	1.80%	1.80%	1.80%	15.72	1.96%	1.96%	1.96%	31309	14.19	2.54%	2.54%	2.54%	30358	31,595
2007	33,713	1.80%	1.80%	1.80%	16.03	1.96%	1.96%	1.96%	31584	14.55	2.54%	2.54%	2.54%	30241	31,846
2008	34,320	1.80%	1.80%	1.80%	16.34	1.96%	1.96%	1.96%	31736	14.92	2.54%	2.54%	2.54%	30174	32,077
2009	34,938	1.80%	1.80%	1.80%	16.66	1.96%	1.96%	1.96%	31919	15.30	2.54%	2.54%	2.54%	30108	32,322
2010	35,567	1.80%	1.80%	1.80%	16.99	1.96%	1.96%	1.96%	32113	15.69	2.54%	2.54%	2.54%	30014	32,565
2011	36,208	1.80%	1.80%	1.80%	17.32	1.96%	1.96%	1.96%	32321	16.09	2.54%	2.54%	2.54%	29929	32,819
2012	36,860	1.80%	1.80%	1.80%	17.66	1.96%	1.96%	1.96%	32527	16.50	2.54%	2.54%	2.54%	29852	33,080
2013	37,524	1.80%	1.80%	1.80%	18.00	1.96%	1.96%	1.96%	32719	16.92	2.54%	2.54%	2.54%	29772	33,338

2014	38,200	1.80%	1.80%	1.80%	18.36	1.96%	1.96%	1.96%	32919	17.35	2.54%	2.54%	2.54%	29688	33,602
2015	38,888	1.80%	1.80%	1.80%	18.72	1.96%	1.96%	1.96%	33123	17.79	2.54%	2.54%	2.54%	29607	33,873
2016	39,589	1.80%	1.80%	1.80%	19.08	1.96%	1.96%	1.96%	33329	18.24	2.54%	2.54%	2.54%	29527	34,148
2017	40,302	1.80%	1.80%	1.80%	19.46	1.96%	1.96%	1.96%	33534	18.71	2.54%	2.54%	2.54%	29447	34,427
2018	41,027	1.80%	1.80%	1.80%	19.84	1.96%	1.96%	1.96%	33739	19.18	2.54%	2.54%	2.54%	29366	34,711
2019	41,766	1.80%	1.80%	1.80%	20.23	1.96%	1.96%	1.96%	33947	19.67	2.54%	2.54%	2.54%	29286	35,000
2020	42,519	1.80%	1.80%	1.80%	20.62	1.96%	1.96%	1.96%	34156	20.17	2.54%	2.54%	2.54%	29206	35,294
2021	43,285	1.80%	1.80%	1.80%	21.03	1.96%	1.96%	1.96%	34367	20.68	2.54%	2.54%	2.54%	29127	35,593
2022	44,064	1.80%	1.80%	1.80%	21.44	1.96%	1.96%	1.96%	34578	21.21	2.54%	2.54%	2.54%	29047	35,897
2023	44,858	1.80%	1.80%	1.80%	21.86	1.96%	1.96%	1.96%	34791	21.75	2.54%	2.54%	2.54%	28968	36,206
2024	45,666	1.80%	1.80%	1.80%	22.29	1.96%	1.96%	1.96%	35006	22.30	2.54%	2.54%	2.54%	28889	36,520
2025	46,488	1.80%	1.80%	1.80%	22.72	1.96%	1.96%	1.96%	35221	22.87	2.54%	2.54%	2.54%	28810	36,840

Average	1.80%			1.96%			2.54%			
1st St De	9.50%	11.30%	68.3% Probability	8.83%	10.78%	68.3% Probability	10.38%	12.93%	68.3% Probability	
2nd St D	**18.99%**	20.80%	**95.5% Probability**	**17.65%**	**19.61%**	**95.5% Probability**	**20.77%**	**23.31%**	**95.5% Probability**	
3rd St De	28.49%	30.29%	*99.7% Probability*	26.48%	28.43%	99.7% Probability	31.15%	33.69%	99.7% Probability	
Change from 2002 to 2025		**50.77%**			**14.23%**			**-6.56%**		**19.48%**

Exhibit 4

Calls for Service Analysis

Year	Calls	Actual Delta	Revised Delta	Rev Cum. Delta
1985	242,077	N/A	NA	NA
1986	265,009	9.47%	9.47%	9.47%
1987	314,364	18.62%	3.07%	6.27%
1988	311,804	-0.81%	-0.81%	3.91%
1989	328,758	5.44%	5.44%	4.29%
1990	334,387	1.71%	1.71%	2.35%
1991	343,364	2.68%	2.68%	2.25%
1992	354,888	3.36%	3.36%	3.30%
1993	373,666	5.29%	5.29%	3.26%
1994	392,980	5.17%	5.17%	4.13%
1995	393,560	0.15%	0.15%	3.49%
1996	361,573	-8.13%	-8.13%	0.62%
1997	365,717	1.15%	1.15%	-0.42%
1998	373,710	2.19%	2.19%	-1.16%
1999	366,841	-1.84%	-1.84%	-1.66%
2000	369,404	0.70%	0.70%	0.55%
2001	387,942	5.02%	5.02%	1.52%
2002	395,728	2.01%	2.01%	1.47%
2003	401,551	1.47%	1.47%	2.30%
2004	410,782	2.30%	2.30%	2.70%
2005	421,869	2.70%	2.70%	2.12%
2006	430,809	2.12%	2.12%	2.15%
2007	440,059	2.15%	2.15%	2.32%
2008	450,250	2.32%	2.32%	2.32%
2009	460,697	2.32%	2.32%	2.23%
2010	470,951	2.23%	2.23%	2.25%
2011	481,558	2.25%	2.25%	2.28%
2012	492,530	2.28%	2.28%	2.27%
2013	503,706	2.27%	2.27%	2.26%
2014	515,072	2.26%	2.26%	2.26%
2015	526,734	2.26%	2.26%	2.27%
2016	538,675	2.27%	2.27%	2.26%
2017	550,871	2.26%	2.26%	2.26%
2018	563,337	2.26%	2.26%	2.26%
2019	576,094	2.26%	2.26%	2.26%
2020	589,141	2.26%	2.26%	2.26%
2021	602,479	2.26%	2.26%	2.26%
2022	616,120	2.26%	2.26%	2.26%
2023	630,071	2.26%	2.26%	2.26%
2024	644,338	2.26%	2.26%	2.26%
2025	658,927	2.26%	2.26%	2.26%

Average	3.07%		
1st St Dev	5.52%	8.59%	68.3% Probability
2nd St Dev	**11.05%**	14.12%	**95.5% Probability**
3rd St Dev	16.57%	19.64%	99.7% Probability

Change from 2002 to 2025 **66.51%** **Using 95% Probable Projection**

Exhibit 5

Ratio of Population to Sworn Officers

Sworn Constant 1.67

	Population		Projected Personnel								
Year	Fresno	%CHNG	Sworn	%CHNG	Non-Swn	%CHNG	Cumulative Distribution Average	Both	Per 1000 Population Sworn	Per 1000 Population NonSworn	Combined per 1000 Ratio
1980	218,200	n/a	345	n/a	117	n/a	0.34	462	1.58	0.54	2.12
1981	231,900	6.28%	355	2.90%	135	15.38%	0.36	490	1.53	0.58	2.11
1982	246,200	6.17%	354	-0.28%	144	6.67%	0.38	498	1.44	0.58	2.02
1983	256,000	3.98%	351	-0.85%	160	11.11%	0.40	511	1.37	0.63	2.00
1984	270,900	5.82%	348	-0.85%	164	2.50%	0.41	512	1.28	0.61	1.89
1985	281,500	3.91%	356	2.30%	188	14.63%	0.43	544	1.26	0.67	1.93
1986	293,900	4.40%	372	4.49%	195	3.72%	0.44	567	1.27	0.66	1.93
1987	309,300	5.24%	410	10.22%	216	10.77%	0.45	626	1.33	0.70	2.02
1988	320,000	3.46%	398	-2.93%	208	-3.70%	0.46	606	1.24	0.65	1.89
1989	334,300	4.47%	397	-0.25%	223	7.21%	0.47	620	1.19	0.67	1.85
1990	350,800	4.94%	410	3.27%	238	6.73%	0.48	648	1.17	0.68	1.85
1991	368,300	4.99%	410	0.00%	235	-1.26%	0.49	645	1.11	0.64	1.75
1992	391,000	6.16%	410	0.00%	233	-0.85%	0.50	643	1.05	0.60	1.64
1993	392,900	0.49%	410	0.00%	233	0.00%	0.50	643	1.04	0.59	1.64
1994	402,100	2.34%	470	14.63%	230	-1.29%	0.50	700	1.17	0.57	1.74
1995	405,100	0.75%	502	6.81%	249	8.26%	0.50	751	1.24	0.61	1.85
1996	405,100	0.00%	551	9.76%	268	7.63%	0.50	819	1.36	0.66	2.02
1997	406,937	0.45%	599	8.71%	273	1.87%	0.50	872	1.47	0.67	2.14
1998	406,937	0.00%	653	9.02%	308	12.82%	0.50	961	1.60	0.76	2.36
1999	416,000	2.23%	694	6.28%	332	7.79%	0.49	1,026	1.67	0.80	2.47
2000	420,594	1.10%	701	1.01%	361	8.73%	0.50	1,062	1.67	0.86	2.53
2001	427,652	1.68%	701	0.00%	361	0.00%	0.50	1,062	1.64	0.84	2.48
2002	448,453	4.86%	715	2.00%	394	9.14%	0.50	1,109	1.59	0.88	2.47
2003	457,309	1.97%	745	4.20%	371	-5.84%	0.50	1,116	1.63	0.81	2.44
2004	468,145	2.37%	782	4.94%	390	5.04%	0.50	1,172	1.67	0.83	2.50
2005	479,372	2.40%	801	2.40%	399	2.40%	0.50	1,200	1.67	0.83	2.50
2006	492,109	2.66%	822	2.66%	410	2.66%	0.50	1,231	1.67	0.83	2.50
2007	506,147	2.85%	845	2.85%	421	2.85%	0.50	1,267	1.67	0.83	2.50
2008	518,550	2.45%	866	2.45%	432	2.45%	0.50	1,298	1.67	0.83	2.50
2009	531,750	2.55%	888	2.55%	443	2.55%	0.50	1,331	1.67	0.83	2.50
2010	545,473	2.58%	911	2.58%	454	2.58%	0.50	1,365	1.67	0.83	2.50
2011	559,750	2.62%	935	2.62%	466	2.62%	0.50	1,401	1.67	0.83	2.50
2012	574,355	2.61%	959	2.61%	478	2.61%	0.50	1,437	1.67	0.83	2.50
2013	589,063	2.56%	984	2.56%	490	2.56%	0.50	1,474	1.67	0.83	2.50
2014	604,277	2.58%	1,009	2.58%	503	2.58%	0.50	1,512	1.67	0.83	2.50
2015	619,928	2.59%	1,035	2.59%	516	2.59%	0.50	1,551	1.67	0.83	2.50
2016	635,997	2.59%	1,062	2.59%	529	2.59%	0.50	1,592	1.67	0.83	2.50

2017	**652,450**	2.59%	**1,090**	2.59%	**543**	2.59%	0.50	**1,633**	1.67	0.83	2.50
2018	**669,300**	2.58%	**1,118**	2.58%	**557**	2.58%	0.50	**1,675**	1.67	0.83	2.50
2019	**686,614**	2.59%	**1,147**	2.59%	**572**	2.59%	0.50	**1,718**	1.67	0.83	2.50
2020	**704,381**	2.59%	**1,176**	2.59%	**586**	2.59%	0.50	**1,763**	1.67	0.83	2.50
2021	**722,605**	2.59%	**1,207**	2.59%	**602**	2.59%	0.50	**1,808**	1.67	0.83	2.50
2022	**741,294**	2.59%	**1,238**	2.59%	**617**	2.59%	0.50	**1,855**	1.67	0.83	2.50
2023	**760,465**	2.59%	**1,270**	2.59%	**633**	2.59%	0.50	**1,903**	1.67	0.83	2.50
2024	**780,137**	2.59%	**1,303**	2.59%	**649**	2.59%	0.50	**1,952**	1.67	0.83	2.50
2025	**800,317**	2.59%	**1,337**	2.59%	**666**	2.59%	0.50	**2,003**	1.67	0.83	2.50
		2.58%		**2.69%**		**2.70%**					

Annual Non-Sworn Growth

Pop. Source: **Development Dept. & Local Projects effective October 2002**
Personnel Source: **FPD Personnel Allocation Resolution**
Personnel Projections: **Everything below dark line are estimates and projections**

Exhibit 6

Ratio of Population to Sworn Officers **Sworn Constant** 2

	Population			Projected Personnel									
Year	Fresno	%CHNG	PopChng	Sworn	%CHNG	Non-Swn	%CHNG	NSwrn to Swrn Distribution	Cumulative Distribution Average	Both	Per 1000 Population Sworn	Per 1000 Population NonSworn	Combined per 1000 Ratio
1980	218,200	n/a	n/a	345	n/a	117	n/a	0.34	0.34	462	1.58	0.54	2.12
1981	231,900	6.28%	13,700	355	2.90%	135	15.38%	0.38	0.36	490	1.53	0.58	2.11
1982	246,200	6.17%	14,300	354	-0.28%	144	6.67%	0.41	0.38	498	1.44	0.58	2.02
1983	256,000	3.98%	9,800	351	-0.85%	160	11.11%	0.46	0.40	511	1.37	0.63	2.00
1984	270,900	5.82%	14,900	348	-0.85%	164	2.50%	0.47	0.41	512	1.28	0.61	1.89
1985	281,500	3.91%	10,600	356	2.30%	188	14.63%	0.53	0.43	544	1.26	0.67	1.93
1986	293,900	4.40%	12,400	372	4.49%	195	3.72%	0.52	0.44	567	1.27	0.66	1.93
1987	309,300	5.24%	15,400	410	10.22%	216	10.77%	0.53	0.45	626	1.33	0.70	2.02
1988	320,000	3.46%	10,700	398	-2.93%	208	-3.70%	0.52	0.46	606	1.24	0.65	1.89
1989	334,300	4.47%	14,300	397	-0.25%	223	7.21%	0.56	0.47	620	1.19	0.67	1.85
1990	350,800	4.94%	16,500	410	3.27%	238	6.73%	0.58	0.48	648	1.17	0.68	1.85
1991	368,300	4.99%	17,500	410	0.00%	235	-1.26%	0.57	0.49	645	1.11	0.64	1.75
1992	391,000	6.16%	22,700	410	0.00%	233	-0.85%	0.57	0.50	643	1.05	0.60	1.64
1993	392,900	0.49%	1,900	410	0.00%	233	0.00%	0.57	0.50	643	1.04	0.59	1.64
1994	402,100	2.34%	9,200	470	14.63%	230	-1.29%	0.49	0.50	700	1.17	0.57	1.74
1995	405,100	0.75%	3,000	502	6.81%	249	8.26%	0.50	0.50	751	1.24	0.61	1.85
1996	405,100	0.00%	-	551	9.76%	268	7.63%	0.49	0.50	819	1.36	0.66	2.02
1997	406,937	0.45%	1,837	599	8.71%	273	1.87%	0.46	0.50	872	1.47	0.67	2.14
1998	406,937	0.00%	-	653	9.02%	308	12.82%	0.47	0.50	961	1.60	0.76	2.36
1999	416,000	2.23%	9,063	694	6.28%	332	7.79%	0.48	0.49	1,026	1.67	0.80	2.47
2000	420,594	1.10%	4,594	701	1.01%	361	8.73%	0.51	0.50	1,062	1.67	0.86	2.53
2001	427,652	1.68%	7,058	701	0.00%	361	0.00%	0.51	0.50	1,062	1.64	0.84	2.48
2002	448,453	4.86%	20,801	715	2.00%	394	9.14%	0.55	0.50	1,109	1.59	0.88	2.47
2003	457,309	1.97%	8,856	745	4.20%	371	-5.84%	0.50	0.50	1,116	1.63	0.81	2.44
2004	468,145	2.37%	10,837	936	25.68%	467	25.80%	0.50	0.50	1,403	2.00	1.00	3.00
2005	479,372	2.40%	11,227	959	2.40%	478	2.40%	0.50	0.50	1,437	2.00	1.00	3.00
2006	492,109	2.66%	12,737	984	2.66%	491	2.66%	0.50	0.50	1,475	2.00	1.00	3.00
2007	506,147	2.85%	14,038	1,012	2.85%	505	2.85%	0.50	0.50	1,517	2.00	1.00	3.00
2008	518,550	2.45%	12,403	1,037	2.45%	517	2.45%	0.50	0.50	1,554	2.00	1.00	3.00
2009	531,750	2.55%	13,200	1,063	2.55%	530	2.55%	0.50	0.50	1,594	2.00	1.00	3.00
2010	545,473	2.58%	13,723	1,091	2.58%	544	2.58%	0.50	0.50	1,635	2.00	1.00	3.00
2011	559,750	2.62%	14,277	1,119	2.62%	558	2.62%	0.50	0.50	1,678	2.00	1.00	3.00
2012	574,355	2.61%	14,606	1,149	2.61%	573	2.61%	0.50	0.50	1,721	2.00	1.00	3.00
2013	589,063	2.56%	14,707	1,178	2.56%	587	2.56%	0.50	0.50	1,765	2.00	1.00	3.00
2014	604,277	2.58%	15,214	1,209	2.58%	602	2.58%	0.50	0.50	1,811	2.00	1.00	3.00
2015	619,928	2.59%	15,652	1,240	2.59%	618	2.59%	0.50	0.50	1,858	2.00	1.00	3.00

2016	**635,997**	2.59%	16,069	**1,272**	2.59%	**634**	2.59%	0.50	0.50	**1,906**	2.00	1.00	3.00
2017	**652,450**	2.59%	16,453	**1,305**	2.59%	**650**	2.59%	0.50	0.50	**1,955**	2.00	1.00	3.00
2018	**669,300**	2.58%	16,850	**1,339**	2.58%	**667**	2.58%	0.50	0.50	**2,006**	2.00	1.00	3.00
2019	**686,614**	2.59%	17,314	**1,373**	2.59%	**685**	2.59%	0.50	0.50	**2,058**	2.00	1.00	3.00
2020	**704,381**	2.59%	17,768	**1,409**	2.59%	**702**	2.59%	0.50	0.50	**2,111**	2.00	1.00	3.00
2021	**722,605**	2.59%	18,224	**1,445**	2.59%	**720**	2.59%	0.50	0.50	**2,166**	2.00	1.00	3.00
2022	**741,294**	2.59%	18,688	**1,483**	2.59%	**739**	2.59%	0.50	0.50	**2,222**	2.00	1.00	3.00
2023	**760,465**	2.59%	19,171	**1,521**	2.59%	**758**	2.59%	0.50	0.50	**2,279**	2.00	1.00	3.00
2024	**780,137**	2.59%	19,672	**1,560**	2.59%	**778**	2.59%	0.50	0.50	**2,338**	2.00	1.00	3.00
2025	**800,317**	2.59%	20,181	**1,601**	2.59%	**798**	2.59%	0.50	0.50	**2,399**	2.00	1.00	3.00
		2.58%			**3.64%**		**3.64%**						***Annual Non-Sworn Growth***

Pop. Source: **Development Dept. & Local Projects effective October 2002**
Personnel Source: **FPD Personnel Allocation Resolution**
Personnel Projections: **Everything below dark line are estimates and projections**

Exhibit 7

Civilian Work Group Costs

Work Group	Defined	Period 1	Period 2	Period 3	Period 4	Period 5	Annual Totals
01A	Blue Collar A	$ 38,426.90	$ 45,642.24	$ 41,614.11	$ 40,954.16	$ 13,950.79	$ 180,588.20
02A	Mgmt-Unrepresented	$ 37,148.48	$ 36,766.29	$ 37,226.06	$ 37,166.51	$ 13,304.51	$ 161,611.85
02A_A	Mgmt Unrep-Annual Leave	$ 16,365.39	$ 14,962.50	$ 17,187.50	$ 15,159.82	$ 5,238.99	$ 68,914.20
03A	White Collar-A	$ 2,930,214.52	$ 2,943,252.78	$ 3,006,636.71	$ 2,761,779.00	$ 953,822.95	$ 12,595,705.96
08A	Unrepresented A	$ 15,546.91	$ 15,546.90	$ 16,176.08	$ 15,749.29	$ 5,416.42	$ 68,435.60
08B	Unrepresented Temps B	$ 224,783.87	$ 198,353.12	$ 136,119.94	$ 140,416.33	$ 53,731.17	$ 753,404.43
08C	PD Acad, Cadets, Guard	$ 167,799.59	$ 191,685.49	$ 230,333.59	$ 242,534.67	$ 108,099.80	$ 772,653.55
13A	Professional Employees CFPEA	$ 289,720.11	$ 295,331.55	$ 302,621.01	$ 285,482.21	$ 97,531.59	$ 980,966.36
13B	Professional Empl. Non-Exempt	$ 47,082.22	$ 46,301.27	$ 46,074.62	$ 45,574.16	$ 15,452.85	$ 200,485.12
14A	Mgmt Employee CFMEA	$ 108,754.20	$ 103,576.07	$ 133,423.19	$ 97,845.87	$ 33,554.97	$ 477,154.30
Total Non-Sworn Wages For Period:		**$ 3,875,842.19**	**$ 3,891,418.21**	**$ 3,967,412.81**	**$ 3,682,662.02**	**$ 1,300,104.04**	**$ 16,717,439.27**
All Reported Wages for Department (+Sworn)		**$ 17,386,219.45**	**$ 16,923,145.97**	**$ 17,295,589.93**	**$ 16,257,053.62**	**$ 5,644,586.72**	**$ 73,506,595.69**
% of Non-Sworn Wages to All Wages		**22.3**	**23.0**	**22.9**	**22.7**	**23.0**	**22.8**
Civilian Staffing (Filled not Authorized)		349	358	356	357	362	**356.4**

Average Annual Personnel Cost per Non-Sworn Employ $ **46,906.40**

Year	# of Non-Sworn Hired Based on *Projections*	# of added Non-Sworn	Cost per Employee	COLA 3%	Total per Year
2003	395		$ 46,906.40	$ 1,407.19	
2004			$ 48,313.59	$ 1,449.41	
2005	399	4	$ 49,762.99	$ 1,492.89	$ 199,051.98
2006			$ 51,255.88	$ 1,537.68	$ -
2007			$ 52,793.56	$ 1,583.81	$ -
2008			$ 54,377.37	$ 1,631.32	$ -
2009			$ 56,008.69	$ 1,680.26	$ -
2010	454	55	$ 57,688.95	$ 1,730.67	$ 3,172,892.23
2011			$ 59,419.62	$ 1,782.59	$ -
2012			$ 61,202.21	$ 1,836.07	$ -
2013			$ 63,038.27	$ 1,891.15	$ -
2014			$ 64,929.42	$ 1,947.88	$ -
2015	516	62	$ 66,877.30	$ 2,006.32	$ 4,146,392.83
2016			$ 68,883.62	$ 2,066.51	$ -
2017			$ 70,950.13	$ 2,128.50	$ -
2018			$ 73,078.64	$ 2,192.36	$ -
2019			$ 75,270.99	$ 2,258.13	$ -
2020	586	70	$ 77,529.12	$ 2,325.87	$ 5,427,038.70
2021			$ 79,855.00	$ 2,395.65	$ -
2022			$ 82,250.65	$ 2,467.52	$ -
2023			$ 84,718.17	$ 2,541.55	$ -
2024			$ 87,259.71	$ 2,617.79	$ -
2025	666	80	$ 89,877.50	$ 2,696.33	$ 7,190,200.31
	TOTALS Over 22 Years	**271**			**$ 20,135,576.05**

Pay Periods:

#1 June 9-August 18, 2002
#2 September 1-Nov 10, 2002
#3 Nov 24, 2002-Feb 2, 2003
#4 Feb 16-April 27, 2003
#5 May 11-24, 2003

Exhibit 8

Sworn Officer Work Group Costs

Work Group	Defined	Period 1	Period 2	Period 3	Period 4	Period 5	Annual Totals
04A	Police Non-Mgmt A	$ 12,159,274.01	$ 11,735,398.29	$ 12,029,918.11	$ 11,364,718.07	$ 3,937,976.34	$ 51,227,284.82
04B	PD Eligible for Shift Pay	$ 518,811.38	$ 507,620.85	$ 513,166.38	$ 479,337.99	$ 163,512.21	$ 2,182,448.81
09A	Police Mgmt A	$ 832,291.78	$ 788,708.62	$ 785,092.63	$ 730,335.54	$ 242,994.13	$ 3,379,422.70
Total Sworn Wages For Period:		**$ 13,510,377.17**	**$ 13,031,727.76**	**$ 13,328,177.12**	**$ 12,574,391.60**	**$ 4,344,482.68**	**$ 56,789,156.33**
All Reported Wages for Department		**$ 17,386,219.45**	**$ 16,923,145.97**	**$ 17,295,589.93**	**$ 16,257,053.62**	**$ 5,644,586.72**	**$ 73,506,595.69**
% of Sworn Wages to All Wages		77.7	77.0	77.1	77.3	77.0	77.2
All Sworn Staffing (Filled not Authorized)		696	691	695	705	707	698.8

Average Annual Sworn Employee Cost: $ 81,266.68

Year	Annual cost per sworn from Actual Payroll	1.67 Ratio Total Sworn	1.67 Ratio New Hires	Total 1.67 Personnel Costs	2.0 Ratio Total Sworn	2.0 Ratio New Hires	Total 2.0 Personnel Costs
2003	$ 81,266.68	745			745		
2004	$ 83,704.68	782	37	$ 3,097,073.19	936	191	$ 15,987,594.05
2005	$ 86,215.82	801	19	$ 1,638,100.61	959	23	$ 1,982,963.89
2006	$ 88,802.30	822	21	$ 1,864,848.22	984	25	$ 2,220,057.40
2007	$ 91,466.36	845	23	$ 2,103,726.39	1012	28	$ 2,561,058.22
2008	$ 94,210.36	866	21	$ 1,978,417.47	1037	25	$ 2,355,258.90
2009	$ 97,036.67	888	22	$ 2,134,806.66	1063	26	$ 2,522,953.33
2010	$ 99,947.77	911	23	$ 2,298,798.63	1091	28	$ 2,798,537.46
2011	$ 102,946.20	935	24	$ 2,470,708.79	1119	28	$ 2,882,493.59
2012	$ 106,034.59	959	24	$ 2,544,830.05	1149	30	$ 3,181,037.56
2013	$ 109,215.62	984	25	$ 2,730,390.58	1178	29	$ 3,167,253.07
2014	$ 112,492.09	1009	25	$ 2,812,302.29	1209	31	$ 3,487,254.84
2015	$ 115,866.85	1035	26	$ 3,012,538.22	1240	31	$ 3,591,872.49
2016	$ 119,342.86	1062	27	$ 3,222,257.22	1272	32	$ 3,818,971.52
2017	$ 122,923.15	1090	28	$ 3,441,848.08	1305	33	$ 4,056,463.81
2018	$ 126,610.84	1118	28	$ 3,545,103.53	1339	34	$ 4,304,768.57
2019	$ 130,409.17	1147	29	$ 3,781,865.80	1373	34	$ 4,433,911.63
2020	$ 134,321.44	1176	29	$ 3,895,321.77	1409	36	$ 4,835,571.86
2021	$ 138,351.08	1207	31	$ 4,288,883.59	1445	36	$ 4,980,639.01
2022	$ 142,501.62	1238	31	$ 4,417,550.10	1483	38	$ 5,415,061.41
2023	$ 146,776.66	1270	32	$ 4,696,853.27	1521	38	$ 5,577,513.26
2024	$ 151,179.96	1303	33	$ 4,988,938.83	1560	39	$ 5,896,018.62
2025	$ 155,715.36	1337	34	$ 5,294,322.36	1601	41	$ 6,384,329.90
Totals			**592**	**$ 70,259,485.65**		**856**	**$ 96,441,584.39**

Exhibit 9